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CLINICAL LECTURE.

RHEUMATOID ARTHRITIS.—SYPHILITIC HEADACHE.—MALARIAL CACHEXIA.—DIVISIONS OF THE ANEMIAS.

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Rheumatoid Arthritis.

Gentlemen: At our last meeting we studied the symptoms, course and treatment of syphilitic, gonorrhœal and simple rheumatism; to-day we will take up a disease which occupies an uncertain position in the nosology of this broad subject. The exact relationship existing between rheumatism and rheumatoid arthritis has not been determined; yet there can be no doubt that it is definite and certain. Rheumatoid arthritis is a disease associated with grave anatomical changes, which appears in gouty subjects, with other affections known to be rheumatic, frequently mingled with other well recognized gouty or rheumatic symptoms. It is also occasionally associated with lesions common in other rheumatic affections, chronic kidney trouble, endocardial inflammations, etc. In syphilitic rheumatism the enlarged lymph glands facilitate diagnosis; not so much the glands in the groin—which are apt to enlarge on any adjacent irritation—as the post-cervical or epitrochlear glands. If these are swollen, it is an important aid to diagnosis. In gonorrhœal rheumatism there is an effusion into the joint of a thick, cloudy, serous exudation, which is not pus, nor yet serum. In rhematoid arthritis every component part of the articulation shows symptoms of chronic inflammatory change. There is the curious contraction, the character of which I am unable to describe; the position and shapes of the joints are altered; new growths of bone appear around the heads of the small bones—for the smaller joints are the ones generally affected; the articular cartilage is absorbed; masses of hypertrophied cartilage appear in the synovial processes; the articular cartilages relax, and displacements and sub-luxations of the unshapely bones occur. Crepitus can be detected, until the process is so far advanced that immobility exists.

In the case before us, which was sent to us as a true example of this disease, there is no bony enlargement, no crepitus on movement, no sub-luxations, no disorganization of the heads of the bones. It is rather a case of chronic rheumatism with contractures than a good specimen of rheumatoid arthritis.

Syphilitic Headache.

The next patient is a man, aged 30, whose habits are fair; he is a tobacco user and a moderate beer drinker; he has no especial family history. He is said to have had malaria in Italy thirteen years ago. On the fifth of August he noticed a chancre; this was followed by no secondary symptoms. On the morning of September 17 he awakened with pain in the leg. This pain spread to the lumbar region, and subsequently to the occipital region. It was throbbing in nature, worse on movement and at night. On admission he had no fever, but on having his temperature taken for the past two days, we found that it ranged from 100° to 100⅘°. All this time, despite the use of anodyne and other remedial measures, his condition grew worse. He was unable to sleep and his general health was beginning to suffer. The possibility of the existence of headache due to disease in other organs—the so-called secondary headaches—led to a careful study of this man's condition. There was present no gastric or intestinal disturbance which

would account for the symptom. His heart, liver and kidneys were in good order. The possibility of toxic headache being the real condition then suggested itself. Malaria, lead-poisoning, rheumatism, syphilis, the early stages of the fevers—especially typhoid—are all frequent sources of this troublesome symptom. There is an old history of malaria, thirteen years ago; there have certainly been rheumatic pains throughout the body; and he has had the primary lesion of syphilis. Rest in bed, with warmth and diet, have brought relief from the pains in the body of which he complained on his admission. They were undoubtedly distinct from his headache. The pain in his head is localized in the occipital region; it is acute, and the spot is tender to the touch. There is no trace of any malarial poisoning; the spleen is not enlarged; there is no cachexia or pigmentation; the blood is in good condition; the man has been in the hospital too long to think of the existence of any of the specific fevers; and no trace of lead-poisoning exists. In obscure cases there can be found frequently traces of trouble which point towards rheumatism; the family history, the occupation, the large quantity of uric-acid crystals in the deposits, high color of the urine, or high specific gravity, are all suggestive of rheumatic involvement.

From the study of the case, we determined that anti-syphilitic remedies should be tried. This early in the course of syphilis, the use of mercurials with the iodide of potassium is indicated. This treatment has been tried for a few days with the result that the man has had two fair nights, when he experienced sufficient relief from his pain to obtain considerable sleep.

Malarial Cachexia.

The next patient exhibits such a degree of pallor that we can at once decide that some grave change must have taken place in the economy. It is difficult sometimes to distinguish jaundice from anemia, which tends towards sallowness. The patient, a man aged 52, was born in North Carolina, and was a resident of that State until within a few months. He is a laborer, one of that class which fills this hospital almost exclusively. He has used alcohol moderately, tobacco not at all; which is somewhat remarkable for a native of a tobacco-growing State. He confesses to no venereal diseases. His family history is exceptionally good; no history of hereditary disease exists. Of course he has been for years a constant sufferer from malaria. He has lived for many years in the swamps of North Carolina, where this disease is indigenous. Although living among the so-called "dirt-eaters"—people of the region who have that unpleasant symptom "pica," or a gnawing desire for unnatural and unsuitable food—he is not one of them. In July of this year he suffered with chills every day; at this time he was taking quinine just as we would take our daily bread. Under this extreme dosing the chills appeared only every third day. Suddenly, four weeks ago, these chills began again every day, each day one-half hour later. On admission the man was weak, exhausted and breathless. Early the next morning after admission he had a chill, when his temperature went up to 104°; later descending to normal. The next two days he had no chill; although on the second day his temperature ran up to 103°, followed by a profuse perspiration. His color is striking; it is a lemon-yellow, with the sclerotic and mucous membrane of the conjunctivæ blanched. All the evidences of anemia exist; there are murmurs in the vessels and heart, indicative of the poverty of the blood.

In this case there have been found none of the characteristics of malarial poisoning; the pigment, floating free or confined in the corpuscles, is wanting. There are, however, organic changes which show the influence of long-continued malarial action. The spleen is greatly enlarged. Normally it extends from the eighth to the tenth rib anteriorly in the mid-axillary line. In this man it extends from the seventh rib to a point nearly in a line with the umbilicus. It is firm, hard, smooth and painless. The location of the long axis of splenic dulness, running from the axilla across towards the umbilicus, making an acute angle to the axillary line is diagnostic of enlargement of this organ. The suggestion that this man's trouble is due to leucocythemia must not be overlooked. The examination of the blood disproves this possibility. That this is not that form of pseudo-leucemia known as Hodgkin's disease, will be shown presently, in summarizing the forms of anemia. Arsenic and not quinine is indicated in such a case.

The study of the causes, diagnosis and course of the various forms of anemia is most interesting and important. In the

first place, in the consideration of symptoms common to all forms of anemia, is the study of pallor. Pallor, while a useful aid in diagnosis is not an unvarying sign of anemia. We can have considerable pallor in the patient, when the examination of the blood reveals the fact that it is normal in quality and quantity. Of the other symptoms, shortness of breath and rapidity of the heart's action are due to the lack of perfect oxygenation; especially is this true when the corpuscles, which are the oxygen carriers, are diminished in number or power. The coolness of the extremities is due to a similar cause; the giddiness to lack of proper nutrition of the brain. In the classification of the divisions of anemias, great confusion still exists. First, they are divided into two great classes: primary and secondary; the primary are those which exist at once, and are due to disturbance in the blood-making organs; the second follow the action of organic disease. A far better division of these anemias is into idiopathic and symptomatic; the idiopathic arising from the blood-making organs; the symptomatic being indicative of disease elsewhere.

Anemia is the want of blood; its diminution in quality or quantity. The constituents of the blood are so altered that it cannot perform its proper physiological functions. Symptomatic anemia appears in the course of such diseases as phthisis, interstitial nephritis, wasting due to starvation, etc. In phthisis it is true that there is some direct loss of material in the discharges; in interstitial nephritis there is some loss of blood in the albumin carried off in the urine; still the great source of anemia is in the disease itself. There is always defective assimilation and nutrition. In the toxemias there is symptomatic anemia, due directly to the destruction of the blood; such forms are seen in syphilitic, malarial, mercurial, arsenical and lead poisoning. In the other great division—the idiopathic anemias, there is definite change in the blood itself, associated with actual destruction of the corpuscles or with such change as prevents their production, hemolysis (?) or hemogenesis. The three great divisions of idiopathic anemias are chlorosis, pernicious anemia and the cytogenetic anemias. This latter form is divided into leucocytic and non-leucocytic, that is pertaining to the formation of leucocytes.

The distinction between symptomatic and idiopathic forms is as follows. There is some reduction in the number of red corpuscles in symptomatic anemia; the hemoglobin is not markedly reduced—the degree depending on the amount of red cells missing. There is no change in the character of the blood; no elements are gone, and no new ones are introduced. In idiopathic anemia there is definite change in the blood; there is diminution in the number of red corpuscles; in some forms there is increase in the number of white cells. There is diminution in the richness of the hemoglobin. Then the corpuscles change in appearance; instead of the red corpuscles being round, they are all sorts of shapes: larger, smaller, club-shaped, etc., forming the so-called Eichorst corpuscle. There is a change in the power of the red corpuscle to carry oxygen. The symptoms are the same as seen in symptomatic forms, differing only in degree.

In chlorosis, the number of cells remain about the same, there being a fall in the amount of hemoglobin, detected by the use of the hemoglobinometer. The use of such instruments of precision is essential in formulating a diagnosis; it is required for the definite discovery of the existence of chlorosis. In pernicious anemia, there is marked diminution in the number of red cells; these running down, in one report, as low as 143,000 to the cubic millimeter; 500,000 is a common count. The change in shape, size and form is more apparent.

The names of "progressive" and "pernicious" applied to this form of anemia are misleading. The disease is not always progressive, being occasionally intermittent, and patients sometimes recover. As more peculiar to this anemia are seen small, spherical corpuscles, Eichorst's being almost pathognomonic of this trouble. Nucleated red cells are also common. There are more marked clinical features than in chlorosis; the pallor is different in hue, yellowish, more suggestive of jaundice. There are some anatomical changes due to the anemia. Degeneration of the blood-vessel walls occurs; their tone is lost; a fatty degeneration of the intima occurs; subcutaneous or submucous hemorrhage follows. This is especially well seen on examining the eye-ground in the retina. With the hemoglobinometer an increase in the richness of the hemoglobin is found, despite the intense diminution in the number of red cells. This is a most striking difference between chlorosis and pernicious anemia.

In the third class, cytogenetic anemia,

we have the leucocytic and non-leucocytic. The leucocytic is further divided into the splenic, medullary and lymphatic. The principal anemia among the non-leucocytic is the so-called "Hodgkin's Disease." Here there is a hyperplastic enlargement of the lymph glands with the development of anemia.

Based on the combination of pathological, clinical and physiological research, Hunter, in London, has made a number of remarkable observations. This observer was anxious to determine the exact position of pernicious anemia. He found in the urine marked characteristics: a great destruction of the red cells producing a high color without alteration in the specific gravity. The spectroscopic and chemical examination revealed the fact that this pigment came from the disintegrated blood. There was found a great increase of iron in the liver, while there was less iron in the other organs. Normally there is a definite relation between the quantities of iron in the various organs. In malaria, pigment is deposited in the cells of the intima, along the course of the blood-vessels. In progressive pernicious anemia, it is deposited—not in the capillaries but in the liver-cells. It was thought at first that the liver took up the corpuscles themselves; but later it was proved that the liver-cells take up the pigment directly from the portal vessels. This condition is associated with carcinoma of the stomach, chronic gastritis, atrophy of the peptic glands, and other gastric and intestinal trouble. The reason for this is the development of specific ptomaines in the intestinal canal, due to the presence of parasites in this canal. Their destruction should take place in the portal circulation, depositing the iron in the liver. The injection of certain chemical substances into the blood will produce the same conditions artificially. In one sense this idiopathic disease is secondary to this process.

In the condition called paroxysmal hemoglobinuria, there is destruction of the blood with its appearance in the urine; with this may be associated intense anemia. Hunter found that these changes occurred in the general circulation, while in pernicious anemia, as we have seen, they are limited to the portal circulation.

—Lycopodium sprinkled on oiled silk prevents the fabric from adhering.

COMMUNICATIONS.

GENERAL CONSIDERATIONS ON THE FEVERS OF THE SOUTH.[1]

BY GEORGE DOCK, M. D.,
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The study of the fevers of the South justly occupies a prominent place in the medical mind to-day. In every society meeting papers are read and discussions held; in almost every journal articles are published bearing on this theme. Everywhere there is great zeal, often close observation and learned reasoning. Yet it must be confessed, after a careful review of the subject, that no advance is made in the accurate knowledge of these diseases. But little is added to what we have long known of the nosology of the special fevers as they occur in our latitude, and no progress is made in clearing up the unsettled points regarding the anomalous or unclassified forms. In every meeting statements concerning even fundamental matters are met by counter statements; in almost every paper old hobbies are urged forward by vigorous hands, often, it seems, "with more desire for victory than for truth." Yet how seldom do we see the complete clinical history of a case, or an analysis of cases; how seldom a temperature curve; how seldom—nay, when do we see the account of an autopsy?

It seems, then, in order to secure better results, we must follow different lines, and in order to know more clearly what these shall be it is necessary to recognize and avoid the errors and short-comings of the past. The most important of these I believe to be the following:

1. Neglect to recognize and follow the general principles lying at the basis of the classification of fevers, and often the first principles of pathological anatomy and etiology.

2. Arbitrary or individual views of special morbid processes and a refusal to accept, for the purpose of organized work, the existence of certain conventional types.

3. A want of objective study, leading to inaccurate observation of cases and loose or general statements concerning them.

[1] Read at the meeting of the North Texas Medical Association, held at Sherman, Texas, December, 1890.

4. An entire absence of anatomical basis for theories or arguments advanced.

5. A tendency to apply novel and often unfounded theories of pathology or therapeutics to the subject.

Examples of each of these errors could be quoted from recent literature, but may with propriety be omitted.

In considering them in detail, we find a common example of the first kind exhibited by a perversion or confusion of certain technical terms, continued and remittent—terms of no value in the ultimate classification of fevers, but very useful clinically. This trait is due partly to an attempt, misguided, I believe, to do away with the distinction of meaning which the two terms should convey. That distinction was made long ago, but before the days of medical thermometry could not always be observed in practice—an objection not valid to-day, when the thermometer is consulted as regularly as the tongue. It is urged with some ingenuity that, as all remittent fevers are continued, in the sense of having no stage of apyrexia, one of the two words is superfluous. But one of the commonest kinds of remittent fever, the malarial remittent, is etiologically nearly related to the most common and characteristic intermittent, while the existence of fevers properly called continued cannot be denied. Now, as the question, whether the malarial fevers ever follow a continued course (in the narrow sense) has not yet been answered in the affirmative, there is great reason why both terms should not only be used, but be used with extreme care for accuracy, following the usage of correct writers. According to this a continued fever is one in which, during a part at least of the disease, the febrile temperature pursues a course modified only by such variations as occur in the normal condition—that is, a difference of not more than a degree Fahr. between the lowest and highest daily range. Closely related is the sub-continued type, where the variation is greater but not so much as in the remittent, when maximum and minimum differ by more than two degrees, without, however, reaching the normal.

This may seem a matter of subordinate importance. A more serious fault, the evil effects of which are hard to throw off, is a departure from the only safe guides to classification—anatomy and etiology. Hence it is that our fevers have as many names as they have local habitations, many of them unintelligible outside of certain localities. Another misconception of general principles is shown by the argument so often used, that a given disease cannot arise in a certain place on account of the absence of its supposititious causative germ. In the present state of our knowledge of pathogenic organisms, such arguments are of no value whatever.

Under the second heading, we find the neglect or refusal to accept the delineations of disease given by the masters of our art, and tested fully in the clear light of pathological anatomy. This is seen especially in connection with cases of enteric fever, which are so often the subject of needless controversy, on account of false ideas of its natural history.

In the same category belongs a refusal to accept as possible the occurrence of two diseases in an individual at the same time, important here because it leads to an erroneous position towards the compound affection called typho-malarial fever. This curious mental attitude is usually defended by an appeal to the authority of John Hunter and his "principle that no two different fevers can exist in the same constitution, nor two local diseases in the same part, at the same time." From this direct quotation (Palmer's ed., vol. iii, p. 3, *et seq.*) it is a question whether the "principle" would apply to the case in point, for it might be urged with great reason that one of the two diseases takes place especially in the blood, the other in certain organs of the abdomen. But the "principle" itself is so at variance with common observation, and with our present ideas of pathology that it is difficult to see how it can be seriously entertained. As a matter of fact, the mixed infection of enteric and malarial fevers, which was recognized by such unbiased observers as Dickson, Drake, Flint and many others, and worked out so impartially by Woodward, has gone through the final stages in the detection of the morbific germs at the hands of Kinyoun; and the question now is, not whether there is such a combination, but when, where and with what aspects it appears.

It is most unfortunate that the term typho-malarial is applied to a condition entirely distinct from the one just mentioned, viz., when a malarial fever assumes the typhoid condition, the word being used after the analogy of typhoid-pneumonia. When such a use is justified by facts (it has not yet been satisfactorily demonstrated that it ever is)

and the person using it makes his meaning clear, no great harm results, though the practice is not worthy of perpetuation.

Other errors are seen in the use of such terms as "catarrhal fever" for conditions very different from those described under that name in text-books, and often without notable catarrhal symptoms; "bilious fever" when there is no "biliousness," etc. Of course, owing to the difficulties of diagnosis, such terms serve a purpose in intercourse with the laity, but that they should be used in technical articles is a matter of distinct disadvantage.

In discussing the evils resulting from inaccurate observation, I speak with great reluctance. Skepticism of the observations of others, if carried too far, destroys all possibility of united work; and yet a great deal of erroneous observation and still more erroneous deduction takes place. Combined with arbitrary views of special diseases it has been productive of great confusion. As an example of this, the following experience, not by any means unique, may be cited: Some months ago a patient was sent from the interior of Texas to Galveston, with the written diagnosis of "continued malarial fever" from the local physician. This name, not used by systematic writers, is in common use in some parts of the country, and it is maintained by many who use it that such cases are neither malarial proper nor enteric. These cases are comparatively common in the place whence the patient came, so I think we may assume that the one under consideration represented the disease so called. In Galveston, however, the attending physician looked on the case as one of enteric fever, and when the patient died, a few days later, requested me to make an autopsy. At that I found the complete anatomical picture of enteric fever, without a trace of recent or old malarial infection. The specimens are here for your inspection.

This brings up the subject of anatomical investigation, the neglect of which is not altogether owing to prejudice against such practice on the part of the laity. It is an interesting fact that those who most strongly argue for the non-existence of old diseases and the occurrence of novel forms are those who pay least attention to the teachings of anatomy, though it cannot be said they do not have fatal cases in which to study it.

The application of novel theories in pathology do no great harm, but they seem to direct attention from the more tangible parts of the subject.

As intimated by the title, it was the object of this paper to call attention to facts of wide application, rather than to discuss the minutiæ of special pathology and differential diagnosis. Yet there are many things in these latter branches too often neglected in the study of our fevers, especially some aids furnished by modern instruments of research—the microscope in particular.

To sum up in a few words the best means of increasing our knowledge of fevers, I would suggest, in the first place, a familiarity with the classical description of fevers given by clinicians whose experience and judgment make them authorities, controlled and extended by observation at the bedside and the autopsy table under experienced instructors. Next, an objective and critical study of every case of fever, with the assistance of all the methods of exact diagnosis; and a thorough study of every fatal case, with the application of all the modern means of investigating anatomy and etiology. Working on these lines; keeping the anatomical limit where possible, and, where not, preferring rather such non-committal terms as "simple continued" than those expressing supposed etiological or anatomical characters, a comparatively short time would show such progress in diagnosis, with consequent increased certainty in treatment as has not been attained by following subjective methods.

THE CURETTE IN FISTULA IN ANO.[1]

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All patients naturally loathe the idea of a cutting operation, be it ever so slight, and will undergo a great many inconveniences as well as endure an immense amount of suffering, rather than submit to the surgeon's knife. While I would not be understood as belonging to that class of physicians who are slow to use the knife when circumstances demand it, yet in certain cases of fistula in ano I should endeavor to effect a cure with the curette, which in the end is a cutting

[1] Read before the Knox County Medical Society, at Knoxville, Tenn.

operation, as it effects a cure by scraping away the tough and thickened pyogenic membrane, thereby substituting for it a healthy surface which heals readily. Moreover, the term "curette" is better received by the patient, who is ignorant of its real nature. Indeed he will actually regard it with favor, and gladly welcome it as a substitute for the knife.

In offering to the profession this mode of curing fistula in ano, I do not claim for it any superiority over the knife, or that it will ever supersede it (believing, as I do, in cases which will never be cured except by a resort to the knife or ligature); nor do I come with a long list of cases cured by this method; but I present the subject on its merits, hoping that, like "seed sown in good ground," it will find a nidus in a fertile spot, which will give us, at some future time, sufficient data upon which to base an opinion in subsequent cases.

The cases for which I would recommend the curette in the treatment of fistula should, for obvious reasons, be select: such as incipient fistula in ano, or those cases after a resort to the knife in one or more sittings, in which healing has taken place in all portions of the wound except at a small tract no larger than a knitting needle or a crow's quill; or even in cases of fistula with two or more sinuses it might be tried. Again, I think it is applicable in cases in which the fistulous tract shows a tendency to fill up from the bottom, and buoys the hopes of the surgeon to that point where he thinks he can dismiss his patient as cured, but in which he will notice after careful examination the least possible drop of pus at some portion of the cicatrix, and should he attempt to examine it with the probe, will find to his horror that it passes into a cavity of considerable size, which is generally barrel-shaped or fusiform. Here it is that the curette is of especial value, as in the following case, sent me by my esteemed friend, Dr. J. M. Kennedy.

The patient was a negro man, about twenty-two or twenty-four years old, and a laborer, who had been troubled with fistula in ano for two years. On examination, I found a large abscess cavity on the left buttock, with four openings, all discharging a thin offensive fluid, and one sinus extending into the rectum, just within the verge of the anus. On November 14, 1889, in the presence of Dr. Kennedy, I laid open the abscess cavity and all sinuses leading into it, washed it out thoroughly, and packed it with lint. The abscess cavity had a worm-eaten, or honey-comb appearance, and was covered with a thin, dirty-looking exudate. The cut edges of the wound were exceedingly rotten and, on pressure between the fingers, could be readily crushed like a mushroom. I saw the patient each succeeding day for the first week, and then gradually lengthened the number and frequency of my visits, washing out and packing the wound each time I saw him. The wound healed readily except a single fistulous tract, which extended up in the ischio-rectal fossa for about two inches.

On December 20, I again operated, making a complete fistula by pushing the grooved director through the gut into the rectum above the internal sphincter, bringing it out at the anus, and dividing all the tissues on the director; afterwards I stuffed the cavity with lint as in the previous case, after having thoroughly curetted it. This second operation was followed by incontinence of feces and an involuntary escape of flatus, which disappeared however in a few days. The wound healed rapidly, except the fistulous tract, which was unclosed as before the operation.

On March 13, 1890, after having injected a drachm of a saturated tincture of iodine into the fistula, I placed the patient on his feet and let him walk about, he having been in bed for nearly four months. On March 15, I gave another injection of the iodine solution, with negative results. On March 27, I injected a four per cent. solution of cocaine into the fistula, which deadened sensibility completely; then, taking my probe-pointed bistoury, I enlarged the opening leading into the fistula sufficiently to introduce a curette, and having thoroughly scooped it out and irrigated it with simple pure water, I packed the wound with lint. I dressed the wound each succeeding day. On May 3, I repeated this operation, and again on June 2, all the while allowing my patient to go about and do as he pleased. On June 23, after having examined the wound and found it had healed in every part, I dismissed the patient as cured; and he remains well to this day.

The main reason I have for presenting this paper before this Society is to show that, even after one or more cutting operations have failed, or the application of a strong irritant is *nil*, a cure may be obtained by other means than the use of the knife or

an irritant. Again, when, after repeated failures, the surgeon may be unwilling to recommend another formal operation to a doubting patient, and thereby risk establishing incontinence of feces or incurring the reproaches of an ungrateful patient, he may have recourse to the curette; which his patient will readily submit to, more especially, if assured that it will be a painless procedure.

Therefore, after having thoroughly tested the curette, in a case which had not only resisted the knife in two formal sittings and two applications of a strong irritant, but had also tried the souls of both physician and patient, I am persuaded that, in certain select cases, such as incipient and external blind fistula, etc., the curette will in the future be the means of curing a good many fistulas, and will thus deliver our patients from that horror of men—the knife.

DIPHTHERIA.

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Diphtheria, in its pathological relations, has been and is still quite complicated in some respects. However, one important factor—the cause—seems to have been settled as being a diphtheritic microbe. But there still remains an important point to be determined. All our leading pathologists agree that two distinct conditions exist: the local and the constitutional, in an individual afflicted with this diphtheritic microbe. But which is primary and which is secondary, is the question that agitates the minds of the pathologists to-day. The opinion of Loeffler on this important question is worthy of serious consideration. He says: "The bacillus is abundant in the pseudo-membrane, but is not found in the blood-vessels, lymphatics or internal organs; so that its pathogenic action must be localized on the surface. If it be the specific principle, it must act by producing a poison where it is localized, which poison causes neurosis and dilatation of the vessels, from which lymph exudes, and entering the lymphatics and circulatory system causes systemic infection." W. Watson Cheyne recognizes the importance of Loeffler's researches and thinks it probable that the micro-organism which causes diphtheria is a bacillus, which, lodging upon the throat, is propagated there. Having upon the mucous surface a favorable nidus for its development, it not only lies upon, but also penetrates the superficial portion of the mucous layer, and causes the exudation of fibrinous material. He furthermore believes it probable that the bacillus produces very poisonous ptomaines, which, entering the circulation, give rise to general systemic infection. That the bacillus is the causative agent of diphtheria is rendered probable, and that systemic infection by the diphtheritic poison is not produced directly by the entrance of the microbe into the circulation, but by ptomaines which spring into existence through the agency of the microbe, is also the opinion of some of the highest authorities in the study of bacteria. It seems to be accepted as a fact that this microbe is capable of setting up a local diphtheritic action in any portion of the body where it finds an inflamed, denuded or cut surface upon which to lodge; also that the microbe requires favorable surroundings for its nidus and propagation. Is it not then probable that this diphtheritic microbe requires the identical material found in the throat; such as saliva, etc., in connection with the results of catarrhal affliction in said region, which are so very prevalent? The principles of medicine teach that, as a rule, two causes are necessary for the production of disease: the predisposing and the exciting cause; also that a resisting force exists in the constitution under peculiar conditions.

Diphtheria is classified as an extremely contagious disease; however we frequently find persons fully exposed to its morbid influence who escape its evil effects entirely. On the other hand, we find persons only slightly exposed, who become victims of the disease in its most severe form. In such instances we have a complete manifestation of a resisting force, and the predisposing and exciting causes displayed; now if this resisting force did not exist in the individual, all persons exposed would be sure victims of the disease. This of course applies not only to diphtheria, but to all contagious, and even to other diseases. In diphtheria we find the constitutional, and local condition markedly distinct; so much so, that a person may have the disease locally, beyond doubt, with the constitution but slightly affected. We know, futhermore, that diphtheria never exists as a constitutional disease unless the local disease is present.

But that the local disease can exist with-

out affecting the constitution, but very slightly, we also know. In no contagious disease do we have the same opportunities for observing and comparing local morbid conditions with the constitutional condition, as in diphtheria. Membraneous croup does not present the same opportunity, for the reason that the local condition is more out of sight. It is true that the local predisposing cause is present in the throat, but the constitutional effect is that which is produced by any interruption in the function of the lungs, while in diphtheria we have the neurasthenic condition to contend with in the general system. In other diseases we have the predisposing cause in the individual for the exciting cause to act upon. But when such is the case, if is from the fact that the constitution is rendered vulnerable by some abnormal condition existing in the blood or organs, this producing the predisposing cause. In diphtheria we may have the predisposed cause in the throat as a local catarrhal inflammation or even a denuded surface. It is fully accepted as a fact that the diphtheria microbe will attach itself to a denuded surface in any part of the body, and the throat being subject to slight catarrhal inflammations at least two-thirds of the time, the throat is a most suitable nidus for the diphtheritic microbe, and it is in the throat that the physician finds the first physical sign with which to make the diagnosis of diphtheria. When we consider the principles of medicine in connection with the opinions of authorities such as Loeffler and Cheyne, who declare, that they believe the bacillus to be the exciting cause of diphtheria, and that they have never found the bacillus beyond the psudo-membrane in the throat, we have excellent reasons for concluding that the local or throat conditions in diphtheria is primary, and the constitutional affection is secondary. From this it follows that our aim in treatment should be to suppress the local condition and to support the constitution in its resistance to the invasion of the poison.

—In using chloroform as an anæsthetic the decomposition of the vapor in the presence of artificial light, especially gas, produces irritating and noxious fumes. These have been analyzed by Kunkel and found to consist principally of hydrochloric acid. Where free ventilation is not possible, water or lime-water, or a solution of soda, exposed in a basin or sprayed will neutralize the acid.

DISEASES OF THE EYE ASSOCIATED WITH CARIES OF THE VERTEBRÆ.[1]

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The diseases of the eye, associated with caries of the spine, are, from necessity, of the same pathological nature—strumous or tubercular. The occurrence of ophthalmic affections, in certain cases of spinal caries, has frequently been observed, and the direct association has been frequently noted. It is impossible, in this connection, to sketch the more important lesions met with; suffice it to mention the various affections, pointing out those which have a particular significance bearing upon the relationship existing.

Among the most frequent diseases affecting the lids and lachrymal apparatus are the various forms of conjunctivitis (acute and chronic), eczema, lupus or *scrofulide tuberculeuse*, and dacryocystitis. Of these, lupus is one of those lesions which may be the only evidence of a tubercular condition, and although its tubercular nature has been doubted by Kaposi, for well-known reasons ("because of the paucity of the bacilli in the morbid changes, the non-appearance of general tuberculosis in the same individual after a long duration of the lupus, the impossibility of multiplying lupus by inoculation, and the almost universal immunity from lupus of other members of the same family")[2], anatomically it contains tubercle-bacilli; and tuberculosis can be reproduced by its inoculation. The presence of lupus is peculiarly significant of struma.

Affecting the anterior portion of the globe is that peculiarly interesting affection—phlyctenular disease, and phlyctenular keratitis, with their periods of exacerbation and improvement, almost peculiar to the strumous diathesis. Hypopium keratitis, ulcus corneæ serpens, as the result of dacryocystitis, episcleritis, scleritis, sclero-keratitis, and even staphyloma of the sclera, are met with as direct evidence of a scrofulous dia-

[1] Read before the American Orthopædic Association.

[2] Jacobi, *Keating's Cyclopedia of Diseases of Children*, Vol. ii, p, 173.

thesis. Particularly significant in this portion of the eye is the so-called iritis serosa—formerly known as Descemetitis, a strumous lesion of the iris, involving frequently the ciliary body and deeper structures; and tubercles of the iris, or, as it was formerly called, *granuloma.*

The former affection, or scrofulous iritis as Vernon[1] called it (retaining the name employed by Mackenzie and others), has not received, in late years, from ophthalmologists, the attention it deserves. In fact, Vernon has spoken particularly of the unsatisfactory and inexact state of our knowledge as regards tubercular affections of the eye in his former paper.[2] The nodules attached to the iris in this disease, upon microscopical examination, have been found to consist of "small nucleated cells, with many free nuclei, and a very scanty intercellular stroma, with *débris* of cells, but without blood-vessels or pigment." These cases cannot be classed in the category of iritis, as generally observed, on account of the early age at which they make their appearance, the futility of therapeutic measures, and the danger to life.

The true tubercular affection resembles somewhat the serous iritis in general course, symptoms, etc., and may even terminate in destruction of the globe. The tubercles of the iris found in this disease, and formerly described as granuloma, differ, however, essentially from the nodules found in serous iritis; but their true nature is perfectly identified by recognizing the characteristic bacilli. The posterior portion of the eye, or deeper structures, are less frequently affected, and when diseases do occur as primary lesions, they present no distinctive features. Among these may be mentioned tubercles of the choroid, as a result of general miliary tuberculosis, and especially of tubercular meningitis; and choroido-retinitis, alone, or associated with optic-neuritis.

It will be observed in this enumeration of the diseases of the eye associated with spinal caries, that the majority, and certainly the constant ones, are all of the strumous or tubercular nature; and this introduces us to the relationship of these two conditions and the significance of these diseases to the osseous lesion progressing within. Referring to the relation between scrofula and tubercle, Treves has given the following conclusions:[1]

1. The manifestations of scrofula are commonly associated with the appearance of tubercle; or if no fully formed tubercle be met with, a condition of tissue obtains that is recognized as being preliminary to tubercle. *Anatomically*, therefore, scrofula may be regarded as a tuberculous or tubercle-forming process.

2. The form of tubercle met with in scrofulous diseases is usually of an elementary and often of an immature character, whereas in diseases called tuberculous in a strict clinical sense, a more perfect form of tubercle is met with in the form of the gray granulation or adult tubercle. (Grancher.)

3. Scrofula therefore indicates a milder form or stage of tuberculosis, and the two processes are simply separated from one another by degree.

Accepting this view there is, in other words, in scrofulous persons a constitutional predisposition to caseation, or a tuberculosis of irritated parts. When the bacillus tuberculosis is actually present in the diseased area, scrofulosis has been succeeded by tuberculosis. In etiology most of these diseases of the eye are scrofulous rather than tubercular, possibly from the fact that, being more superficial and accessible, attention is earlier directed to them.

In this connection it is interesting to observe an antagonism, not absolute, but tolerably well established, which seems to exist between the external and internal tubercular processes. This is why phthisis is not more frequent in subjects of hip disease, why subjects with external cervical gland disease are not more often attacked with pulmonary tuberculosis, and why subjects with angular curvature (caries of the vertebræ) are not more commonly attacked by it. It is because of this apparent antagonism that exists between the tubercular diseases, that it is, moreover, unusual for two grave manifestations of scrofula to be active at the same time—one will become manifest, while the other is observed to improve or subside. This observation is particularly to be noted in the associations under consideration. It is common to observe the ophthalmic diseases improve or subside altogether while an exacerbation of the osseous affection supervenes, and *vice versa.* It may be considered, then, as established that the majority

[1] Vernon, *British Medical Journal*, 1874, Vol. ii, p. 276.

[2] *St. Bartholomew's Hospital Reports*, Vol. vii.

[1] *Scrofula*, etc., London, 1882, p. 21.

of cases of spondylitis are tubercular; that the etiology of these diseases of the eye and of the caries is the same (*i. e.*, insufficient diet and infection); and that they are both liable to exacerbations.

These facts taken altogether have a peculiar significance, and indicate a prophylaxis and a necessity for treatment which might otherwise be overlooked.

There is constantly going on, in the economy, a warfare by the active, healthy, cellular structures which compose the human organism, against the invasion of parasites. Whether the claim of Metschnikoff be accepted, that the degeneration of the bacilli (which has long been known to occur within the giant cells), results directly from this phagocytic action; whether the statement of Baumgarten be admitted, to regard the relation of the giant cells to the bacteria as one of the strongest evidences against the theory of phagocytosis; or whether the agnostic expression of Osler be taken as the present state of our knowledge—the indication to employ both constitutional and local treatment deserves emphasis.

In conclusion, if this short paper convert but one practitioner to the importance of treating all localized tubercular lesions with constitutional as well as local treatment, the object for which it was written will have been accomplished.

To summarize, then,

1. The diseases of the eye associated with caries of the vertebræ are scrofulous or tuberculous.

2. Scrofulosis is a predisposition to caseation; tuberculosis is the infection with tubercle bacilli.

3. Both the diseases of the eye and the caries of the vertebræ require constitutional as well as local treatment.

REPORTS OF CLINICS.

BUFFALO GENERAL HOSPITAL.

MEDICAL CLINIC—DR. CHAS. CARY.

The first patient had been before the class already. He was admitted two months ago, suffering with uremic poisoning. At one time the urine fell to 170 c. c., with 4 grams of urea in the twenty-four hours. Dr. Cary said that he was brought before the class now, more to show what humanity can endure than for further elucidation of the case. He had had œdema and ascites, which gradually diminished as the condition of the urine improved in quantity and quality. Albumin was still present in large amount. The first examination impressed Dr. Cary with the idea that there was something behind the maladies which were apparent, and he had therefore examined him daily, and every two or three days there had been some new development. He had had pericarditis with a most marked friction sound, which disappeared before the day on which the ward-class was to examine him, but which had reappeared, and it was now heard indistinctly. He also developed endocarditis. The liver was at one time lower than normal; then it returned to its normal position; and now it was down again. The liver was depressed in position rather than enlarged, and the change of position was due to the varying quantity of fluid in the right chest—for the man had had pleurisy of both sides with an abundance of effusion. The presence of pain and fever and the development of inflammation of the endocardium and pericardium determined the diagnosis of pleurisy instead of hydrothorax. The man also had a pneumonia of the left lung.

The patient was a mere shadow of his former self. When first presented to the class his legs were enlarged from the dropsical effusion; now there had been not only an absorption of the effusion, but also a wasting of the muscles, so that he was reduced almost to a skeleton. During the course of the pericarditis he had received small doses of opium and mild counter-irritation, about rather than over the pericardium. The effusions had been carefully watched, so that aspiration might be performed if necessary; but they had been reduced by salines instead, and when they had become slight nothing had been done for them. On account of the chronic renal disease, there was no prospect of the patient's recovery, and the fact that his life had been prolonged by good nursing and symptomatic treatment was really no benefit to one in his deplorable condition.

Rheumatoid Arthritis.

The next patient was a single man, thirty-four years old, though appearing much older. He was born in Buffalo of Irish parents. He had been a hired man on a farm. His family history was wholly negative. He had enjoyed fair health until two years ago. Five

years ago, while killing hogs, one of the pigs pressed his right knee against a pump-spout, causing considerable pain but no disablement at the time. Two weeks later the knee became sore and slightly swollen on the inside. He did not consult a physician, but relieved the pain and swelling by using a liniment. The knee gave him no further trouble for two years, when the symptoms returned spontaneously but without confining him to the house. The knee improved, but did not become entirely well; and a third attack confined him to bed for three or four weeks, the right knee being much inflamed and swollen, and the left participating to a less degree. A physician aspirated both joints. Even before the knee-joints were so badly swollen as to need tapping, the wrists, elbows and right ankle began to swell.

The man had had gonorrhœa eight years ago, lasting seven days, and without recurrence. The beginning of his trouble could not, therefore, be a gonorrhæal synovitis. His countenance, sunken eyes, flushed cheeks and coated tongue indicate that he is suffering from some constitutional disturbance. His left pupil was shaped like an old-fashioned kite, curved above and coming to a V below. This suggested iridectomy, but the man said the condition was congenital, and that the vision of this eye was better than that of the right. Syphilis was denied.

The knees were much enlarged, the patella was three or four times its normal size and the swelling, especially at the inner side, was soft and fluctuating. Under the finger there were movable masses, undoubtedly of cartilage, which could be chased around by the finger. There was a parchment-like crackling. The legs were markedly atrophied.

A similar enlargement was present to a less degree in the ankles, wrists, elbows and metacarpo-phalangeal and many of the interphalangeal articulations. There was also muscular atrophy of the arm and forearm.

This, said Dr. Cary, is the disease called rheumatoid arthritis or arthritis deformans, or, by some, rheumatic gout, which is not a classical name. It is an essentially chronic disease prevailing much more among the poorer classes than among the well-to-do; for which reason it has been described as the arthritis of paupers. A clean-cut differentiation between this disease and rheumatism cannot be made, any more than between acute and chronic rheumatism. If this man had been brought before a class two years ago, he might have been used to illustrate chronic rheumatism, and his first serious attack of inflammation might possibly have been erroneously described as acute articular rheumatism; but at this stage the diagnosis is unmistakable.

Rheumatism is a disease that attacks only fibrous structures, sometimes the synovial membrane, sometimes the ligaments of a joint, sometimes the pericardium, heart-valves, pleura, etc. Chronic articular rheumatism damages a joint more by the production of fibrous ankylosis than by causing any definite pathological alteration. In this disease there is an absolute inflammatory growth of bone. There is an inflammation of the cartilages, so that they enlarge and form nodules projecting into the joint cavity under the synovial membrane, and fragments may then break off and lie loose in the fluid of the joint. The deeper layers of cartilage become more bony, and the superficial layers soften, so that the cup which the cartilage forms on the end of a bone becomes deeper. There is an enlargement of the ligaments about the joint, and even the synovial fluid is increased, and it is usually thick, dark and almost mucoid. Later in the disease the muscles take on spasmodic contraction. This man has never had cramps; but, as he stands, the muscles of the leg are in a state of tension, and complete extension of the leg is impossible. The elbow also cannot be flexed and extended as widely as it normally should.

This disease was described even in the last century, although under a different name. The cases are usually not seen so far advanced as this one.

What is the poison to which the disease is due? Many contradictory answers have been given. Some claim that it is due to sepsis, citing those cases which begin with gonorrhœal arthritis as proofs. Others say that it is tubercular, one member of a family having this form of arthritis while another has typical tuberculosis. It is not probable, however, that there is any such close connection, although tuberculosis may arise in a joint already diseased in this way. Others claim that it is due to faulty nourishment, bad air and unfavorable environment. This is certainly true; but is not a complete explanation.

Not uncommonly the heart is diseased along with the rest of the connective tissue structures. This patient has a mitral regurgitant and an aortic obstructive murmur.

Treatment is not very promising, mainly because the persons affected are usually unable to follow the directions which would naturally be given. Massage, sojourns at Vichy, Carlsbad, Saratoga, etc., are quite beyond their means. The taking of plenty of good rich food is beneficial—quite the contrary of the indication in rheumatism. Iron is serviceable. The skin, bowels and kidneys should be kept active.

Acute Endocarditis.

The history of this patient was as follows: J. G., twenty-five years old, single, born in this country of Irish parents, laborer. His father, fifty years old, had had rheumatism a great deal. The mother died at the age of thirty-six years, of some acute disease. Four brothers and one sister were alive and in good health. The patient had had varioloid and measles in childhood, malarial fever eight years ago, gonorrhœa six years ago, chancroid or perhaps chancre five years ago. He had indulged for six years in periodical sprees. His general health had been good. About four weeks ago he got wet and took cold. He became better, but then had pain in the back and shoulders, which were still lame and painful. He had been rather short of breath for about a year. His urine was yellow, faintly alkaline, urinous in odor, with a specific gravity of 1.017, depositing considerable white sediment, but without albumin or sugar. The man's temperature on admission was 98.2°, his pulse 94, his respiration 20. He had an eruption on his arms which he said came out when his blood was out of order. He had been taking "blood medicine." There was a history of a sore on the penis, which was described as a soft chancre. His hair had not fallen out, nor had he had sore throat, etc. Dr. Cary said that he probably had had syphilis.

When he entered the hospital the man had a loud mitral regurgitant murmur, and as there was no cardiac hypertrophy, and as he never had rheumatism before, acute endocarditis was diagnosticated. Rest and salicylates were ordered, and later iodides were added. He had lost the pain in his arms and shoulders and the murmur had almost disappeared.

—The Malabar nut of East India is in vogue amongst the natives as a cure for scald-head and other microphytic skin diseases.

PERISCOPE.

Treatment of Hemorrhoids.

In an article in *The Cincinnati Lancet-Clinic*, November 29, 1890, Dr. L. J. Krouse gives a summary of the treatment of hemorrhoids, in which he says:

The ligature dates its origin back to the time of Hippocrates. His method consisted in applying a woolen thread as ligature to the base of the tumor, and then cutting off the strangulated mass. This method, with some improvements, has been handed down to our own times, and has been brought more into favor by Allingham. His method is to have the bowels first thoroughly moved by a cathartic, and shortly before the operation a large enema should be given, both for its cleansing effect as well as to bring the piles well into view. While the patient is straining, each pile should be caught separately by a tenaculum. Acting on the anatomical knowledge that a pile is supplied by a blood-vessel which enters from above, he cuts the pile loose from its attachment below and then dissects up the mass to about the point where the blood-vessel enters. A ligature is then thrown around the pedicle and the mass is cut off. If the pile is very large, it is divided into two or more segments by transfixing the mass with a needle armed with a ligature, and each segment is separately tied. The stump is then returned within the sphincter. This method is the one that is most commonly used, and requires from ten days to two weeks' confinement to bed, and frequently necessitates the use of the catheter.

The clamp and cautery method was first used in London, in 1848, by Mr. Lee. His plan of treatment consisted in applying a clamp to the base of the tumor, cutting off the greater portion of the protruding mass, and then applying nitric acid to the raw surface. Mr. Henry Smith, of the same city, has used this method for many years, and has improved it by using the actual cautery instead of nitric acid to the raw surface. "The method of using the clamp," he says, "is very simple, and consists of the following manœuvre. The diseased portions, being well brought down previously by an injection, are separately seized with a vulsellum and handed to an assistant. The part is then enclosed within the blades of the clamp, which are screwed home quickly and thoroughly. The prominent portion of the

pile or prolapsus is then cut away by a sharp pair of scissors. The cut surface is next dried by a piece of lint or sponge, and either nitric acid or the actual cautery, so shaped as to come into contact with the whole of the raw tissue, is applied. When this is effected the blades are gently and slowly unscrewed, and, if there is no bleeding, the part is well oiled and allowed to return within the cavity of the gut; if, however, any bleeding point is seen, the blades are quickly screwed together and the cautery applied until the vessel is thoroughly sealed up. The finger is then introduced well up into the rectum. This step serves the triple purpose of returning all the parts well, of compressing any point which may possibly bleed, and of exciting the sphincter to healthy action."

More formidable than either of the preceding methods is that which goes under the name of Whitehead's operation. It consists of the removal of the entire pile-bearing region. A circular incision is made around the anus at the junction of the skin and mucous membrane, and an inch to an inch and a half of the mucous membrane of the lower part of the rectum is removed. Only the affected and diseased mucous membrane with some of the submucous tissue, is excised, the other coats of the gut not being interfered with. The healthy portion of the mucous membrane above is then brought down and is attached to the skin of the anus. An ideal surgical procedure! This operation is limited to those cases of severe type, where the whole circumference of the gut is studded with piles.

Leaving these more severe surgical operations, which require the patient to be under the influence of an anæsthetic, we come to the simpler methods, which can be readily done in the physician's office, and which most physicians rather prefer, as no blood is spilt.

The injection method consists of injecting a certain amount of a coagulating fluid into the pile by means of a hypodermic syringe. Different surgeons use different fluids. Kelsey employs carbolic acid in 15, 33, 50 and 95 per cent. dissolved in water with enough glycerine to keep the solution clear. Dr. Fenn's solution consists of equal parts of fluid extract of ergot and a 95 per cent. solution of carbolic acid. Dr. Washburn uses a solution of carbolic acid in sperm oil in the proportion of 1 to 2 or 1 to 4, depending upon whether he wishes to produce sloughing of the tumor or only induration. Givard employs a solution consisting of tannic acid one part, carbolic acid two parts, alcohol four parts, and glycerine eight parts. The injection fluid used by those that follow the so-called "Brinkerhoff system" is composed of carbolic acid ℥i, olive oil ℥v, and zinc chloride grs. viii.

Electrolysis has been used to destroy these tumors. The positive electrode, which is a needle, is introdnced into the centre of the tumor, while the negative pole is placed on an indifferent portion of the body. A current strong enough to produce a caustic effect should be used.

Having mentioned the various modern methods in use for the destruction of these tumors, it behooves us to analyze which of them is the safest for the patient, and which will cure him in the shortest time.

Henry Smith, in his report of over four hundred and fifty cases, in which he applied the clamp and cautery, not only to hemorrhoids, but also to prolapsus, states that he has lost but two cases. In only one of these cases was death due directly to the operation, the patient suffering from a prolapsus of such extent as to bring down part of the peritoneal covering of the bowel; this caused secondary peritonitis with fatal issue. He condemns the method of ligation, saying that it is often followed by ulceration, tetanus, pyæmia, and occasionally by death.

Bodenhamer, although not agreeing with Mr. Smith in his general condemnation of the ligature, still says that "the method by clamp, scissors and actual cautery, is the best and safest, and should be preferred if ever such an operation is resolved upon."

Kelsey now uses almost entirely the clamp and cautery, and says that after ligating these tumors, according to the plan of Allingham, he often found his patients suffering great pain, which lasted from eight to ten days, and that he was frequently compelled to use the catheter for several days. Since using this method, his patients are almost entirely free from pain and seldom has he need to resort to the catheter. The convalescence is shortened, the patient being up on the second or at most on the third day. According to Mr. Smith the patient so treated leaves the hospital on the fourth, fifth or sixth day.

Van Buren says that "the actual cautery, with our present facilities of applying it, stands very nearly on a par with the ligature."

As regards the injection plan of treatment, most authorities who were at first highly pleased and enthusiastic over it, have, after their first enthusiasm passed away, given up this method almost entirely.

It was claimed by those who used this method that it was safe; that it was free from pain, and that it necessitated no confinement from work.

On the contrary, Dr. Matthews declares "that it is painful, insufficient and liable to cause death by peritonitis, embolism and pyæmia."

Allingham says that he has "tried the injection plan, but the result was much pain, more inflammation than was desirable, a lengthy treatment, and the result doubtful; certainly not a radical cure."

Kelsey, who at first was an enthusiast, is not so now, and rarely uses it unless in selected cases. He claims that sloughs, marginal abscesses, lymphangitis, ischio-rectal abscesses and deep fistula frequently follow, but has never seen a fatal case.

Andrews states "the method is moderately, put positively dangerous, and we cannot recommend it as proper in ordinary cases." In 3,304 cases collected by him, he finds that there were 13 deaths: embolism of the liver, 8; abscess of liver, 1; dangerous hemorrhage, 10, permanent impotence, 1; stricture of rectum, 2; violent pain, 83; severe inflammation, 10; sudden and dangerous prostration, 1; carbolic acid poisoning, 1; failed to cure, 19; sloughing and other accidents, 35.

In conclusion Dr. Krouse says that judging from the views expressed by well-known authorities, and from his own experience, he believed that good results may be obtained by any of the surgical methods mentioned above. He says that he has a preference for the clamp and cautery operation, which seems to him to be the safest, producing a good result in a short time with the least discomfort to the patient. In cases, however, in which the patient absolutely refuses the major operation he would not hesitate to employ the injection plan, using, however, the weaker solutions.

Meat Preservation.

Dr. Hans Beu, in the *Centralblatt für Bakteriologie und Parasitenkunde*, points out that nearly all the newer methods of preparing preserved meats have had to give way before the older methods of boiling, drying, salting and smoking, which, along with freezing, preserve the taste and digestibility of meats better than any of the chemical methods that have more recently been recommended. All these old methods, he maintains, hinder decomposition and keep meats eatable for a longer or shorter period. Cold acts by preventing putrefactive changes in meat, 2° to 4° C., with good ventilation, preventing the development of most organisms. Boiling with subsequent exclusion of air is, of course, good, but can only be carried out in large establishments and under specially favorable conditions. Drying gets rid of the water, without which micro-organisms cannot develop, but, although there is no loss of albuminoid or salts when this method is used, the taste is somewhat impaired. Salt also acts by removing water, but it also removes the extractives, and interferes with the delicate flavor of both meat and fish. Smoke acts partly by drying, the heat at which it is generated rendering this necessary, but partly, also, by the action of the small quantities of the antifermentative constituents, such as creasote, carbolic acid and even volative oils, which appear to have a direct action on the vitality of putrefactive organisms. The author agrees with Förster, that salt has little or no effect upon most pathogenic organisms, but it undoubtedly interferes with the development of the cholera bacillus and of anthrax bacillus that contains no spores, and probably, also, of some of the non-pathogenic but putrefactive forms. As the result of his experiments on a very large number of food materials, such as ham, bacon, pork, various kinds of sausages, and fish, Beu comes to the conclusion that most meats are salted not only to preserve the taste, but also to withdraw a large proportion of the water from flesh; that smoking also withdraws a considerable quantity of water, that it hides the salty taste, and that, being able to penetrate dried flesh, it is better able to exert its antiputrefactive action than on fresh meat. Salted lean flesh, exposed to the action of smoke at from 22° to 25° C. for forty-eight hours, no longer contained liquefying organisms, which had been present in considerable numbers before the smoking operation was commenced, but non-liquefying organisms disappeared only on the ninth day of smoking. Salt bacon salted for ten days, and then exposed to the action of smoke for forty-eight hours, also showed no liquefying

organisms with a fragment from near the centre taken with the most strict precautions, and broken up in liquid gelatine, which was afterwards allowed to solidify. All non-liquefying organisms had disappeared on the seventh day of smoking. Bacon salted for five weeks contained no organisms after seven days' smoking. Fresh unsalted meat contained both kinds after six days of smoking, and sausage also contained both at the end of twelve days; this being exactly in accordance with what would be expected from the large amount of water that is contained, from the nature of the meat used, and from the many manipulative processes through which it has to go before the smoking is commened. Fish may be preserved for a short time by smoking only, but it could not be kept permanently. Hams and larger sausages require a longer period of smoking than do similar smaller articles of diet.—*British Medical Journal, Supplement*, November 22, 1890.

Small Doses.

In the *Edinburgh Medical Journal*, December, 1890, Dr. J. L. Porteous praises the use of small and repeated doses of a variety of drugs, among them gelsemium, calomel, opium, nux vomica, and nitro-glycerine. Speaking of the assayed fluid extract of gelsemium he says: "I have found wonderful benefit derived from the use of this medicine in minute doses—say five drops of the extract in four ounces of water, one teaspoonful of this every ten minutes for one hour, then every hour. When I first read of this mode of administration of the drug I was sceptical, but at the same time was determined to try it. I had an early opportunity, which presented in the form of threatened pneumonia. The condition of patient was as follows:—There were minute crepitations; pain in lungs; temp., 104°; pulse, 130; skin hot and dry. After two hours' treatment, as above, the skin became moist, temperature and pulse were reduced, and what appeared to be the commencement of an attack of pneumonia averted. If aconite in same proportion be added, the results are even more satisfactory.

The drug is powerful. Five drops may cause double vision and other toxic symptoms, but when given in minute doses these symptoms are avoided, and the beneficial effects of the medicine only are produced. Of course this medicine is not infallible, and Dr. Aulde thinks that if it does not relieve within twenty-four hours it ought to be discontinued. He has found it of service in the neuralgic pains of dysmenorrhœa."

Calomel, in small doses (gr. $\frac{1}{10}$) Dr. Porteous says, is a sedative to the stomach, liver and intestines, and favors the pouring out of the watery portions of the blood into the intestines. Small doses increase the secretions, large doses arrest them. Tablet triturates, each containing gr. $\frac{1}{10}$, prove useful in derangement of the alimentary tract in children often due to torpid liver. One must be given every half-hour till six or eight have been taken.

Opium given in small (gr. $\frac{1}{8}$) repeated doses, contrary to general teachings, *increases* secretions—*e. g.*, ovarian or other reflex pain which interferes with secretion and causes constipation is undoubtedly relieved by them. By them pain is relieved to such an extent that the secretions are re-established and purgation is the result. If given in like doses in bronchitis, where there is great dryness and burning pain with every cough, after several small doses secretion will take place and the raw feeling relieved.

Ten drops of nux vomica in a wine-glassful of water, of which one teaspoonful is given every ten minutes for one hour, then every hour, has proved beneficial in the only case of vomiting of pregnancy in which Dr. Porteous tried it. The stimulating effects are not only felt upon the terminal filaments of the pneumogastric, but this action is carried to the liver, and extends to the entire nervous system, and as long as there are no astringents given to arrest peristalsis, the bile is carried downwards, and the vomiting ceases. In typhoid fever, when it is lingering and vitality is at a low ebb, it proves useful given of same strength as mentioned above, only every hour during day, and every two hours during night.

Nitro-glycerine has been in much favor for some time. Dr. Porteous has found it useful in one-drop doses of a one per cent. solution every five minutes during a paroxysm of asthma. If given in tablet form the tablet should be dissolved in the mouth before swallowing.

Chinese Treatment of Diphtheria.

The *Lancet*, November 22, 1890, says that a popular remedy for diphtheria, which has been employed in China for over 300

years, recently formed the subject of a communication by M. Lecerf to the Société de Médecine Pratique of Paris. The treatment consists of blowing a powder into the throat, using a decoction of plants as a gargle and drink, and the employment of certain hygienic measures. The powder is called *sin-seh*, and it appears to consist essentially of borax, camphor, powdered pearls, cinnabar, acetate of copper and charcoal, the percentage of borax and camphor being respectively 42.5 and 12. From twenty to thirty centigrams of this powder are blown through a paper tube every two hours. The decoction is difficult to imitate, as it is made from the following: roots of the coptis teeta (Scutellaria viscidula), Hanax quinquefolium or ginseng and Platycodon grand; flowers of Caprifolium chinense, fruit of the Uvularia cirrhosa, bark of Pterocarpus flavus, Capanus flavus root, and Glycyrrhiza glabra. About fifty grams of each are boiled in a pint of water until it is reduced to 200 cubic centigrams. This is filtered, allowed to cool and given in three doses in the twenty-four hours. The regimen enjoins the avoidance of ice, cold drinks, sugar and fatty matters and fruits, but allows at first boiled rice, eggs and salt fish, and later boiled chicken and bread. A large number of cases are said to be cured in three days, but the evidence on which they are termed diphtheritic is by no means conclusive.

Tuberculous Milk and Diseased Udders.

Dr. B. Bang, of Copenhagen, in the *Münchener med. Wochenschrift*, October 14, 1890, gives an account of his investigations undertaken to determine whether or not milk from tuberculous cows, but cows with healthy udders, is virulent. Observations made in the Copenhagen slaughter-house indicate that only a little over one per cent. of tuberculous cows have pronounced tuberculous udders. It is important, therefore, to determine whether the milk of tuberculous cows with healthy udders contains bacilli and is capable of transmitting the disease. Bang's first studies, made in 1884, led him to decide this question in the negative. In 1888, Bang made experiments with the milk of twenty-eight cows, nearly all tuberculous in a high degree, but with healthy udders. Forty-eight rabbits were subjected to intraperitoneal inoculation, and of the whole number only two became affected with the disease. The results of Hirschberger, working in Bollinger's Institute, were very different. He inoculated guinea-pigs intraperitoneally with the milk from twenty different tuberculous cows, and found eleven of the guinea-pigs infected. As guinea-pigs are more susceptible of tuberculosis than rabbits, Bang determined to re-investigate the question and use guinea-pigs. Forty of these animals were inoculated with the milk of twenty-one cows. The cows furnishing the milk were in a high degree tuberculous. After furnishing the milk they were, some time later, slaughtered, and their organs sent to Bang for investigation. He was thus enabled to know with certainty the exact condition of the animals. The milk of seventeen of the cows was not virulent, while that of four proved to be virulent. In three of these four cows, there was disease of the udder of different degrees. In the fourth cow, no disease of the udder could be detected, but the animal had advanced tuberculosis of the lungs, pleura, mediastinal and mesenteric glands, liver and intestinal canal, and had *died* of the disease, whereas the other animals had been slaughtered. Moreover, the udder had suffered from a chronic inflammation with shrinkage. The appearance was not that of tuberculosis, but as the tissue was not examined under the microscope tuberculosis could not be excluded absolutely even in this case.

The result of Bang's investigations appears to prove that the milk of tuberculous cows is virulent (by inoculation) only when there is at the same time disease of the udders.

Irregular Typhoid Fever Rash.

The *New York Medical Journal*, December 6, 1890, quotes Dr. R. L. MacDonnell as pointing out in a clinical lecture, in the *Montreal Medical Journal* for November, some atypical conditions of the skin among his cases at the General Hospital. The number of patients with the disease—seven men and five women—was somewhat larger than usual at this season of the year, but the type of the disease has, for the most part, been a mild one. Unilateral sweating was noticed in the case of the strong young Englishman who had a fairly severe attack of the fever. On the day of his admission

the one-sided sweating was well marked, but it had disappeared three days later. In one case a pale scarlatiniform rash was noted within a few hours after admission, confined to the neck and shoulders; it was of short duration. No medicines had been administered. In the case of a young girl, urticaria in distinct wheals manifested itself in the third week of an attack that had not been severe. In the case of a pregnant woman, who had a protracted attack of typhoid, there was jaundice lasting three days. In the case of a man who had a sharp attack, with extreme meteorism, for the relief of which turpentine stupes were used, pustules appeared upon the abdomen at the site of the typhoidal eruptive spots; in some of these small abscesses, containing from half a drachm to a drachm of pus, were formed.

This accident Dr. MacDonnell had noticed once before as a result of the use of turpentine stupes in fever. Four irregular forms of eruption in typhoid fever have been specified by Moore, of Dublin, such as erythema fugax, miliary eruptions, erythema simplex (seu scarlatinale), and urticaria. The scarlatiniform rash is most likely to show itself at the end of the first week or in the course of the third week, and when it appears early it is apt to give rise to diagnostic embarrassment, but the prodromes of scarlet fever are wanting, and the rash has been of a lighter color, less rough and punctiform than that of the exanthem; the rash is a blush rather than an eruption, and may be considered as a result of some disturbance of the peripheral vaso-motor system.

Alterability of Diuretine.

The *American Journal of Pharmacy*, December, 1890, says that diuretine is decomposed by all acids, even carbonic acid. Exposed to the air it becomes partially insoluble, making it necessary to treat it with caustic soda. Even in solutions, carbonic acid acts upon diuretine, and the mixtures become cloudy on account of the precipitation of theobromine. Not only weak acids, but such salts as the biborates, bicarbonates and dimetallic phosphates, decompose diuretine; hence, we cannot use it with fruit syrups or with soda bicarbonate. There is no advantage in giving theobromine transformed into diuretine, since, on reaching the stomach, it is decomposed by the gastric juice. It would be preferable to give theobromine in cachets or by enema.

Palatable Emulsion of Creasote.

The *Western Druggist*, November 15, 1890, gives the following for a palatable preparation of creasote, the taste of which is notoriously hard to disguise.

℞ Creasote	gtt.	16
Oil of clove	"	8
Oil of cinnamon	"	4
Oil of peppermint	"	4
Olive oil	fl. oz.	1
Acacia	fl. dr.	4
Water	"	6

Make an emulsion and complete the mixture by adding

℞ Glycerin	fl. dr.	4
Water . . . . enough to make	" "	4

Each tablespoonful contains one drop of creasote. The aromatics may be increased.

The Tetrahydronaphthylamines.

Dr. R. Stern, in the *Archiv für pathologische Anatomie*, gives an account of some recent experiments made on animals with the tetrahydronaphthylamines. The preparation used was an aqueous solution administered hypodermically. An increase in temperature resulted in an hour, with dilatation of the pupil and general symptoms of poisoning. There was an increase in the quantity of urine voided, and in its nitrogenous and phosphatic constituents, the poison reaching its maximum effect on the second day, when the symptoms gradually subsided. The observer concluded that the changes in the urine were not those common to high temperature, but were consequent upon the specific poisonous action of the drug.—*New York Medical Journal*, November 29, 1890.

Challenge to a Fast.

Dr. H. S. Tanner, who fasted forty days, now lives near Clinton, Missouri. He has challenged Succi to sit down with him in Chicago during the World's Fair to test the matter in a ninety-days' fast on water only, or, if Succi prefers, let the fast continue from day to day till one or the other yields the contest.

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.
When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.
The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

DIAGNOSTIC SIGNIFICANCE OF THE TUBERCLE BACILLUS.

Whatever views may be held in regard to the value of Koch's remedy for tuberculosis, there is certainly a very widespread conviction that the bacillus which he described as constantly present in tuberculosis is of great importance as an evidence of the nature of the morbid process. Careful and conscientious students of tuberculosis have doubted and have denied the significance attached to the bacillus by the followers of Koch; and the REPORTER has more than once indicated a feeling that the latter go further in some of their assumptions than the facts warrant. But fairness to our readers demands that we present what we believe are the views of the profession—even when they do not accord entirely with those of the Editor.

For this reason we call attention to a short communication in the *University Medical Magazine*, November, 1890, by Drs. Fussell and Kelly, of the University of Pennsylvania, urging the significance of the tubercle bacillus as diagnostic of tubercular phthisis.

In 1887 Dr. Fussell read a paper before the Philadelphia County Medical Society, based on the examination of the sputa of 100 cases of lung disease. The conclusions arrived at were: That the presence of tubercle bacilli in the sputa of any given case was undoubted proof of tuberculous phthisis, and that the continued absence of the organisms from the sputa of any given case was good, though not positive, proof of the absence of phthisis. These conclusions were confirmed by examination of the sputa of sixty-five cases in 1890.

In these sixty-five cases, forty-four patients had undoubted physical signs of phthisis, and tubercle bacilli were present in the sputa of all. Four had doubtful physical signs, and tubercle bacilli were found in the sputa of all. Eight had no physical signs of phthisis, and tubercle bacilli were absent from all. Nine had doubtful physical signs, and tubercle bacilli were absent from all.

The nine cases in which the signs were doubtful, and tubercle bacilli absent, are full of interest, but space prevents their extended notice. Two were cases of pneumonia, one of the apex in a boy with Pott's disease, where phthisis was feared, but who has entirely recovered. Another of the cases did not take the usual course of pneumonia, but has completely recovered. There was a case of pleurisy; one of anemia, with cough, etc. In all these cases it was a great relief to the physicians when repeated examinations failed to demonstrate bacilli.

That the ground, "absence of tubercle bacilli is good, though not positive, proof of absence of phthisis" is well taken is proved—Dr. Fussell thinks—by one of the cases he cites. This case is quoted in Dr. Fussell's article as one with doubtful signs,

absence of bacilli and recovery. In 1887 he had been under observation for one year, and seemed entirely well, but in 1889 he again came under observation, with marked consolidation of left apex, numerous bacilli in sputum and death early this year.

As the method of examining sputum for tubercle bacilli is simple, not requiring much technical knowledge, and but a moderately powerful microscope, it seems as if such examinations ought to be made in all cases in which there is suspicion of tuberculosis. By such examinations something would almost always be gained, and—if nothing else—a store of observation which might bring to agreement those who now do not agree on what is one of the most interesting pathological questions of the present day.

MYXŒDEMA RELIEVED BY GRAFTING WITH THE THYROID.

Myxœdema is a curious affection in which the features become broad, flattened and expressionless. The eyes appear too wide apart, the wings of the nose are thick, the lips large, the loose tissue below the eyes increased and folded, and heavy folds of connective tissue form under the jaws and in the neck. The tongue also undergoes enlargement and interferes with articulation, while the hands are broad and spade-like. The person affected gradually becomes less active mentally and physically, the prevailing mood being one of placid indifference and apathy.

Several varieties of myxœdema have been described: Myxœdema of adults (pachydermic cachexia of Charcot); operative myxœdema of Reverdin (cachexia strumipriva of Kocher); and idiocy with pachydermic cachexia of Bourneville and Bricon —the sporadic cretinism of English writers. The link which unites these varieties is absence of the thyroid body, or its disappearance as the result of disease or surgical operation. Kocher found that removal of the thyroid for goitre, which is so common in Switzerland, resulted in producing a condition very similar to cretinism in the adult; and Horsley produced a similar condition by removing the thyroid in monkeys. Following these experiments, Schiff went a step further by making the first graft of a thyroid. His purpose was to prove that the thyroid has chemical and hematopoietic functions independent of its position. He showed this by transplanting to the peritoneal cavities of several dogs, some time before doing thyroidectomy on them, portions of a thyroid from another dog. The result was satisfactory: the animals survived thyroidectomy without presenting the phenomena usually provoked in animals by ablation of the thyroid. Eiselsberg confirmed Schiff's experiments, employing cats instead of dogs, and adding the important observation that the death of the animal from thyroidectomy is prevented only when the graft of another portion of thyroid succeeds.

If the grafting of a portion of thyroid prevents the results of thyroidectomy in animals, why should it not prevent or overcome myxœdema in human beings? asked Horsley, in the *British Medical Journal*, February 8, 1890. Lannelongue, as described in an Editorial in the REPORTER, April 12, 1890, undertook to accomplish this, and it has been tried also by Bircher, Kocher and others. In *Le Mercredi Médical*, November 19, 1890, Merklen and Walther give a review of the cases in which grafting with the thyroid for myxœdema has been done, and report in detail a case of their own. The patient was a woman, forty-one years old, who had had myxœdema for ten years. Metrorrhagia preceded by ten years the development of myxœdema, and had never ceased since the occurrence of the latter. Walther, at the request of Merklen, transplanted one of the lobes of a thyroid from a sheep into the sub-mammary region on the right side of the patient. The operation was done so that only a few seconds elapsed between the removal of the

portion of thyroid from the sheep and its insertion into the patient.

The metrorrhagia from which the patient suffered ceased three days after the operation, and had not been reproduced up to the time of the report, seventy-two days subsequent to the operation. At the same time there was a remarkable improvement in the patient's myxœdema; the outward evidences of the disease became less conspicuous, speech was much more distinct, and the patient could walk easily and quickly about the ward, whereas several weeks before it had required fifteen minutes for her to make the tour of the ward.

The exact future of this operation cannot be predicted at present. It is perhaps a step in the right direction; and while those who may require it are unquestionably more numerous in Europe than in this country, there is no impropriety in calling attention to it here. One thing deserves mention before leaving the subject; in some of the cases in which grafting has been done, the transplanted thyroid has, after a time, atrophied, the symptoms of myxœdema have reappeared, and a second grafting has been necessary. In Merklen's case, also, the transplanted thyroid, when last examined, appeared to have diminished somewhat in volume. Perhaps later experience will avoid the disappearance of the graft by indicating a better seat for it.

THE GONOCOCCUS IN THE DIAGNOSIS OF VULVITIS.

Physicians are often in doubt whether a particular vaginal discharge is gonorrhœal or due to some other cause capable of provoking suppurative inflammation. When, in adults, the discharge has appeared suddenly, is purulent in character, and in its early stages has been associated with scalding pain on micturition, a hot and tender vagina with bright red points covering the mucous membrane, and with a red, velvety or granular os uteri, the probabilities are altogether in favor of gonorrhœa. And yet it is doubtful whether many men could be found willing to take the witness stand and declare positively, from the symptoms and appearances we have described, that the disease is gonorrhœa. The difficulty becomes still greater when the patient is not an adult but a child. Fortunately the cases of gonorrhœa in little girls are much less frequent in this country than they appear to be on the continent of Europe, where physicians to law courts have been put to it to find an infallible method of differentiating gonorrhœal vulvitis from that due to other causes.

The discovery of the so-called "gonococcus" by Neisser was hailed by many with enthusiasm. Supposing it to be the specific cause of gonorrhœa, then to find it in a suspicious discharge would be proof of the gonorrhœal character of the discharge. But it was scarcely discovered before assertions were made that it could be found in non-specific discharges, and that it could not be distinguished under the microscope from other bacteria, particularly diplococci. The latter conclusion is the one to which Vibert and Bordas have come. These writers have investigated, from a medico-legal point of view, the discharge present in the vulvitis of little girls, and declare, in *La Médecine Moderne*, November 13, 1890, that microscopic examination of such discharge never enables an expert to affirm that a particular vulvitis is or is not gonorrhœal. They find the gonococcus practically indistinguishable from the diplococcus—both bacteria, they say, have the same form and dimensions, the same arrangement in masses and heaps, and not in chains, and they stain alike and are alike deprived of their stain by alcohol.

It not infrequently happens that men are accused of having committed rape upon little girls, and sometimes vulvitis is adduced as one of the evidences of the violation. A vulvitis, however, has been found in a violated child although the person guilty of the rape was free from any evidences of urethral

disease. It would seem to be impossible, therefore, in the present state of our knowledge of the bacteriology of gonorrhœa, to base upon it a diagnosis sufficiently positive to warrant a judgment by the court in a criminal suit. No doubt this difficulty will be overcome by and by, and perhaps by cultivation the gonococcus can be distinguished from the diplococcus. But just now the conclusion seems to be that our methods of detecting the gonococcus are not precise enough for medico-legal purposes.

Book Reviews.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the Reporter.]

THE DAUGHTER—HER HEALTH, EDUCATION AND WEDLOCK. By William M. Capp, M. D. 5½x7 inches, pp. viii, 144. Philadelphia and London: F. A. Davis, 1891. Price, $1.00.

Dr. Capp's little book is written in an attractive style, and contains a great deal of what he fitly calls "homely suggestions for mothers and daughters." The subject of the book is the development and training of young women for the position and duties peculiar to their sex. It is decidedly pleasant to see a book of this sort, which—in the present fever to make women like men—treats of them as women solely. Dr. Capp gives such advice as, we think, will be welcomed and approved by womanly women, and of a sort which, well pondered and wisely followed, will tend to increase the number of women capable of being good and loved wives and mothers. We commend his book to the attention of the readers of the Reporter, and believe it would be a help to most thoughtful parents who have daughters to train.

A MANUAL OF THE PRACTICE OF MEDICINE. By Frederick Taylor, M. D., F. R. C. P., Physician to, and Lecturer on Medicine at Guy's Hospital, etc. 8vo, pp. 877. With illustrations. Philadelphia: P. Blakiston, Son & Co., 1890. Price, $4.00.

Dr. Taylor has undertaken to write a short yet complete account of the present state of medical practice. It cannot be denied that such an undertaking demands great courage when one considers the vast extent of the field to be covered. Only a man of large experience, and one accustomed, through teaching, to concise and exact methods of thought and expression, could accomplish the task; but Dr. Taylor has succeeded admirably.

After a short but pithy introduction, the author takes up specific infectious diseases, including in this classification, influenza, syphilis and tuberculosis. The following two hundred pages are given to diseases of the nervous system. Then follow in succession accounts of the diseases of the organs of respiration and of circulation, diseases of digestion, diseases of the ductless glands, lymphatic system and blood, diseases of the urinary organs, diseases of the organs of locomotion, and, finally, diseases of the skin.

The author is aware that in treating of diabetes under diseases of the kidneys, and of rheumatism and rickets under diseases of the organs of locomotion, he lays himself open to criticism. He has placed them where he has for convenience and provisionally, until a better understanding of their pathology makes a proper classification possible.

We have already spoken in warm praise of the book, and have only to add that it is just the one to put into the hands of a student who wishes to read up a subject while he is listening to lectures on practice; it is full enough to be clear without being full enough to confuse.

A COMPEND OF HUMAN ANATOMY, INCLUDING THE ANATOMY OF THE VISCERA. By Samuel O. L. Potter, M. A., M. D., Professor of Theory and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Small 8vo, pp. 315. Fifth edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co., 1890. Price, $1.00.

The present volume includes in one the author's compends on "Human Anatomy" and "Visceral Anatomy" which were originally published in separate parts. The text as first published, has been somewhat amplified, and the number of wood-cuts increased by eighteen, so that now the whole number of cuts is one hundred and seventeen. In an appendix are given sixteen plates representing the nerves and arteries.

The book as it stands is a very complete compend of anatomy; indeed, if it were not for the arrangement, one might be justified in speaking of it as a small treatise on anatomy. We can recommend it to students, and to any of our readers who desire such a book.

Correspondence.

Work in the Woman's Hospital of Philadelphia.

To the Editor.

Sir: Apropos of the excellent Editorial entitled "The Modern View of Diseases of the Uterus" in the Medical and Surgical Reportfr December 13, 1890, it may be of interest to your readers to learn something of the past year's work in gynecology at the Woman's Hospital of Philadelphia—not the "Woman's Medical College Hospital" as is often stated. The "Woman's Medical College of Pennsylvania" and the "Woman's Hospital of Philadelphia" are distinct institutions with entirely separate management, although with a common interest.

A review of the work in the Hospital for the past year shows that the tendencies of modern thought and the refinements of surgical science have materially affected its methods of procedure. Since aseptic sur-

gery has robbed the knife of its terrors, and an exploratory incision may be made, as every surgeon knows, without costing the patient the loss of even a drachm of blood, it has not been thought necessary to subject patients to a long-continued treatment in the dark, with palliative measures, before resorting to more radical means for discovering the true nature of their maladies, and the possibility of relief. Our proportion of abdominal sections is for this reason larger than that of previous years, although not really so large, as yet, as the number and character of the cases applying to us for relief would warrant.

Of 668 patients treated in the house, nearly 500 were gynecological cases, while 1,948 cases were treated during the year at the gynecological clinic alone. Of 56 laparotomies performed, 48 were for disease of pelvic origin. Six of these were ovariotomies; four were hysterectomies; thirty-one were for the removal of diseased uterine appendages; four for the breaking up of adhesions and correction of uterine displacements; one for the removal of a dermoid cyst; two for multiple puncture of cystic ovaries. Four deaths occurred among the number; three of them in cases of suppurating ovarian cystomata—in all of which general sepsis had existed prior to operation, from absorption of fetid pus which had long been incarcerated in the pelvis. The fourth death occurred a week after the performance of a successful hysterectomy in a patient with frequent severe hemorrhages from a bleeding fibroid. The patient had been thus bleeding for two years, and her anemia was extreme. Not an ounce of blood was lost during the operation. An autopsy showed a perfect condition of the abdomen, wound and stump. The heart was very pale with flabby walls, a small clot was found in one of the chambers. The stomach was somewhat enlarged and distended with flatus. The supposition was that death occurred from embolus, or interference with the action of a very weak heart caused by the pressure of the distended stomach. The case had been afebrile throughout. Death occurred within half an hour of the patient's complaint of pain in the region of her heart. How striking a comment do these four cases offer to the evils of delay in resort to operative procedure!

Among the cases of simple amputation of the uterine appendages, no deaths occurred. The results in the cases surviving operation have been, as a rule, most gratifying. In twenty-five cases of successful abdominal section this year, reported by me in the November number of the *Annals of Gynecology and Pediatry*, the results here in every case surpassed my expectations. All the cases in which pain existed have been entirely relieved, and the general condition of the patient has been greatly improved. I speak of this here, as reference was made to some of these cases in an article in the REPORTER, August 16, 1890, when it was much too early after operation to make results worth recording. In an experience with about one hundred and twenty-five cases of abdominal section which have come under my immediate charge, I have always found a logical explanation where the operation failed to meet expectations. Either the operation had been undertaken too late to afford more than a forlorn hope, or the complications resulting from repeated attacks of inflammation had been found to be insurmountable, resulting in a partial and unsatisfactory removal of diseased structures, the remains of which continued to serve as a source of local irritation. Surgery must sometimes undertake desperate cases, and it loses prestige thereby. Of minor operations, 64 perineorrhaphies were performed and 30 trachelorrhaphies, etc., amounting in sum total to 155. Operations in general surgery and those performed in our obstetrical wards bring the number of house operations up to 306. The addition of the operations performed in the various departments of our Dispensary work makes the total number 731.

Electricity has been but little employed in the management of our cases during the past year; and this because of my honest conviction that, as yet, the laws governing the action of this subtle agent are too ill-defined to render its use safe in conditions of disease affecting the delicate structures to be found in the pelvis.

Five years' personal trial of the methods of electricity as advised by its advanced teachers, has led me to this decision. Although, as resident in the Hospital in 1882, I was taught to employ electricity to some extent for the relief of pain, the control of hemorrhage, etc., it was not until 1885 that the Apostoli methods were fully introduced here. It was then that one of our physicians visiting Apostoli's clinic in Paris and studying his methods, brought home with her various forms of electrodes

and appliances as recommended by him. The Managers of the Hospital generously supplied us with an excellent and expensive battery capable of giving a current of 150–200 milliampères, and imported a galvanometer said to be of the best make. Since then the literature of the subject has been carefully followed and every effort made to bring about the conditions which would favor success. The Apostoli electrodes have been used, the Apostoli clay-pads employed and Apostoli rules followed. Intra-uterine applications have never been relegated to assistants, excepting under my direct supervision and instruction.

A pupil of Apostoli, one of Dr. Chas. K. Mills, and one of Dr. Massey, who have at different times, had charge of our electrical clinic, may have occasionally given intra-uterine applications to dispensary patients; but as a rule, such applications have been confined entirely to house patients. For many months no intra-uterine applications have been permitted to be employed in dispensary work. The result has been that in our hands electricity has proved an uncertain, unsatisfactory and at times a treacherous agent. Among a large number of cases treated, I cannot recall one we could consider permanently cured by its means. Relief of pain for variable periods of time with the occasional control of hemorrhage, has been obtained while the patients continued under treatment. Repeated attacks of inflammation have occurred, notwithstanding precautions. These, taken in time were readily suppressed; but that they left their impression upon the peritoneum was very evident in several instances where a final resort was had to laparotomy. A special proneness to the occurrence of omental adhesions I have found in many cases. One case of fibroid will perhaps serve as an illustration. The patient was admitted to the Hospital in February, 1886, when the record states her condition to have been as follows: "A large fibroid mass, *very movable*, apparently interstitial, fills the pelvic brim and extends to one inch below the umbilicus; cervix effaced."

From February 19 to September 7, 1886, the patient was treated by galvano-puncture, alternating with intra-uterine applications, according to Apostoli's method. After her last treatment on September 6, 1886, I find the following entry: "Tumor about the same size as when patient came in, the severe paroxysmal pains from which she has suffered continue to recur." On June 16, 1887, the patient returned to us. The tumor was found to be wider laterally than it had been before, and the amount of pressure it exercised brought the body of the uterus down in the anterior *cul-de-sac* to within 1½ inches of the vulva. The patient remained with us under electrical treatment until August 26, 1887, when she was discharged, materially in the same condition as when she came. She returned for the third time to the Hospital on December 31, 1887, when she was seen by Dr. Granville Bantock, of the Samaritan Hospital, London. Dr. Bantock thought the case unfavorable for operation, because of the fixation and lateral developments of the tumor. Treatment with electricity was again begun, but it was continued only about one week, domestic difficulties calling the patient home. Her extreme distress, and the fact that the tumor was greatly increasing in size, so that it now reached almost to the diaphragm, led her to return to us for the fourth time on December 13, 1888. She begged to have an attempt made for its removal. An exploratory incision was performed on December 29, 1888. The tumor and all the contents of the abdomen were a conglomerate mass of adhesions, so that removal was an utter impossibility. A few parietal adhesions were broken up and the abdomen was closed.

This sad life was terminated by death from sepsis due to breaking down of the tumor early in the spring of 1890, after the most intense suffering.

Since the discovery of truth should be the aim of all earnest workers, and the free discussion of medical topics can alone stimulate the intellectual processes essential to the development of science, I trust the expression of my views concerning electricity will not be regarded as a personal attack upon any of your readers who may hold different opinions of its claims.

Experts in electricity will indeed confer a blessing on humanity if they can prove that by the use of this agent disorganized tissue can be restored to its original conditions and functions. Reconstruction is to be preferred to ablation. Ordinary conditions of beginning inflammation are not those which baffle the skill of the gynecologist. The vicious conditions of life and thought which render pelvic disease so prevalent in this day, result in maladies so various and complicated that human skill is appalled at the difficult task of undertaking their cure.

The wise control of preventive medicine may in time lead to the extinction of such maladies; but as they exist, the important question is: How shall they be managed?

It is a difficult thing for any physician to advise a patient to shut herself out from the possibility of experiencing the joys of motherhood, and it can only be done when one feels the conviction that disease has already rendered *safe motherhood* an impossibility to her.

In our Hospital, where we are accustomed to explain to the patient and her friends the full nature of any operation with its results, and obtain from them a written statement as to their desire to have the procedure carried out, before it is attempted, I have yet to find the man who has not been willing to sacrifice every other consideration to his wife's good. It has oftener been the woman who has hesitated or deliberately chosen a life of suffering with a possibility perhaps of sudden death, rather than accept the alternative of a childless life.

Very truly,
ANNA M. FULLERTON, M. D.,
Physician in Charge.
Woman's Hospital,
Philadelphia.

Powder Blower.

TO THE EDITOR.

Sir: In January, 1889, I read a paper on Diphtheria before the Practitioners' Club of this city, which was published in part by you in your issue of November 23, 1889. In this paper I strongly advocated the use of sulphur in diphtheria and tonsillitis, and quoted authorities in support of its claim to usefulness for hundreds of years.

After reading the paper I presented to the society an instrument I had constructed for examining the throat and introducing sulphur and other medicated powders, to take the place of quills, cut-off catheters, glass tubes, putty blowers, rolled-up paper, and the many troublesome makeshifts, that have always vexed the souls of doctors and nurses. It was accepted as a happy solution of the question, and has since been used with much satisfaction, especially as it has been found a great improvement on other tongue spatula for throat inspection. It consists of a small tube four or five inches long, with a spoon attached to it. The spoon is bent on itself to pass over the tongue and shove it forward, and is highly polished to illuminate the parts, and is to be washed in boiling water to prevent contagion. The powder is to be blown through the tube by the mouth, or any powder blower.

A year's experience has demonstrated its usefulness, and also shown its possible needs. To make it complete, I have now added a rubber ball, with a scoop attachment, which makes it a firm continuous instrument to be used with one hand. And to make it still more complete, a tube with a bulb is to be attached to the ball and scoop, for nasal insufflation or irrigation.

These attachments also greatly enlarge its use; and since aristol has given such an impetus to powder medication of the nose and throat, the instrument seems to promise usefulness in the treatment of acute or chronic catarrh, as well as of diphtheria and tonsillitis. But the little illustration sent—which please have your printer place in your advertisement columns—will tell the story better than pages of fine print.

Yours truly,
J. D. OSBORNE, M. D.
1034 Broad Street,
Newark, N. J.

QUESTIONS AND ANSWERS.

[In this department will be published questions on any medical subject by readers of the REPORTER, and answers by the EDITOR or by other readers.]

Difficulty in Micturition.

DR. GILES LUCAS, of Alma, Ark., writes for information about the following case. Mrs. J., seventy years old, the mother of two children, of nervous temperament, and rather active for one of her age, consulted him in May for the relief of the following trouble. She said that for the last ten years she had been troubled at intervals of from ten days to several weeks with spells of painful and frequent micturition. The spells lasted from two to ten days. During the spells she suffered constantly with throbbing pain about the neck of the bladder. When she voided urine—which she was compelled to do every fifteen or twenty minutes—the pain was almost unbearable.

On examination, Dr. Lucas found that the urethra was very sensitive about the sphincter of the bladder, and there was some resistance to the passage of the catheter. There was no morbid growth or other abnormality. The introduction of

the catheter gave her so much relief, that she frequently calls on him to repeat it. The introduction of the catheter, or sound, and the local use of morphia, are the only means that relieve her. Her urine is normal. This case has given Dr. Lucas great anxiety, and any information concerning it will be gladly received.

NOTES AND COMMENTS.

Depopulation of France.

It is somewhat startling to find that the depopulation of France is becoming a common subject of discussion among the *savants* of that country. The phrase is perhaps somewhat stronger than the circumstances of the case warrant, the fact being that the population of France is simply stationary. Still it is a striking and significant circumstance that while the population of all the other great European nations is steadily and rapidly advancing, that of France remains at a standstill. On economic grounds this arrest of increase in number might seem not altogether an unmixed evil, inasmuch as it should tend to diminish over-competition, and to ease the already excessive struggle for existence among the lower classes; but an impression widely prevails that given a fairly normal and healthy social condition a growth of population is a natural result, and that a stationary or declining population is an index of some grave disorder of the body politic. We cannot adequately discuss this large and difficult question, but our French neighbors evidently think that something is amiss, and are looking around for the cause and for its remedy. Probably the causes are numerous and complex. Social habits may account for a good deal. The French custom of subdividing land and of providing a dowry for girls offers an obvious motive for keeping down the number of children. Where, as in the west of Ireland, the peasantry have a cheap food supply, and are constitutionally averse to thrift, large families are the rule; but in France thrift is a virtue carried almost to excess, and the obligation of the parents to provide for each new accession to the family is clearly recognized. Moral causes have been supposed to play a large part in the arrest of the population of France, and we are far from under-estimating their importance, but this is a difficult and delicate problem, on which it would be rash to dogmatize without the most ample evidence.

While some of the causes of the phenomenon under discussion may be obscure and remote, others lie under our eyes, and cannot be too carefully scrutinized or too frankly acknowledged. In a recent address before the Académie de Médicine, Dr. Brouardel, drew attention to the abnormal mortality from small-pox and typhoid fever which prevails in France. He points out that while Germany loses only 110 persons per annum from small-pox, France actually loses 14,000. Dr. Brouardel attributes this astounding difference to the rigid way in which vaccination is enforced in Germany, and to the carelessness of his own countrymen in this matter. Statistics show that in 1865, when vaccination was not obligatory in Prussia, the mortality was 27 per 100,000 inhabitants. After vaccination was enforced the mortality fell in 1874 to 3.60 per 100,000, and in 1886 to 0.049. At the present time the mortality from this cause in France is 43 per 100,000. We make a present of these figures of Dr. Brouardel to the Royal Commission on Vaccination.

As regards typhoid fever the deaths due to this disease in France amount to 23,000 per annum. Dr. Brouardel gives a great variety of statistics to show that the liability to typhoid is in direct proportion to the imperfections in the water-supply, and that in proportion as a sufficient supply of pure water is provided, typhoid abates. Thus, at Vienne the typhoid mortality was 200 per 100,000 while the inhabitants drank surface, hence often polluted, water; but this mortality fell to 10 per 100,000 on a thoroughly good supply being obtained. At Angoulême the introduction of a new supply of pure water reduced the number of cases of typhoid in the proportion of 0.063 to 18. At Amiens, among the military population, the typhoid mortality fell from 111 per 10,000 to 7 when a pure supply of water was secured by artesian wells. At Rennes the inhabitants formerly drank from contaminated wells, with the result that typhoid fever was always endemic. The introduction of pure water reduced the deaths from typhoid among the military population from 43 per 10,000 to 2. Investigations carried out at Besançon, Tours, Carcassonne, Paris and Bordeaux entirely corroborate the above striking figures. Typhoid fever is responsible for the deaths of 1 soldier in 335 in France, or 298 per 100,000, and this in time

of peace. In war its ravages are even far greater. Thus the expeditionary corps to Tunis in 1881, consisting of 20,000 men, had 4,500 cases of typhoid with 884 deaths.

Dr. Brouardel concludes by affirming that if vaccination and re-vaccination were rendered obligatory in France, and if the towns were everywhere supplied with pure water, the country would save from 25,000 to 30,000 lives annually, and these, for the most part, of young persons of marriageable age. He therefore proposes to the Academy to adopt the following conclusions: "That the sanitary law in preparation ought to render vaccination obligatory; it ought to furnish sufficient authority to the municipalities, or in their default the Prefect or the Government, to secure the public health against the dangers which result from using polluted water."

In the discussion which followed Dr. Brouardel's communication many important points were elicited. One speaker drew attention to the evils which arose from cheap lodging-houses. Another insisted upon the superiority of supplying pure water to any methods of filtration. At Angoulême filtration was tried with some advantage, but the provision of a pure supply proved much more successful.

We may learn something from the anxieties of our neighbors. If the outcry against compulsory vaccination now prevailing in some quarters in this country should unhappily effect any slackening in our vigilance in this matter, we shall surely pay the penalty in a heavier mortality from one of the most loathsome of diseases. The example of Germany in this matter is admirable and cannot be too widely known or too carefully followed. The provision of an absolutely pure supply of water to our large cities is a much more difficult problem than the thorough enforcement of vaccination, but it is at least the ideal towards which our efforts must be directed. It is an immense gain to know positively both the source of danger and the means of averting it, and we must never rest content so long as an acknowledged source of disease, misery and national weakness is permitted to exist in our midst.—*Lancet*, December 20, 1890.

Apomorphia.

In the *Medical Record*, December 6, 1890, Dr. J. S. Horsley, of West Point, Ga., has an article, in which he advocates the use of apomorphia to control spasmodic seizures of various kinds. He describes the results which followed its administration in four cases under his care, in all but one of which it is probable (in our opinion) that the effect was wholly due to the relief produced by vomiting.

However, we may quote what Dr. Horsley says, so that he may speak for himself. He says he could mention other cases illustrative of the beneficial effects of apomorphia, but he thinks the cases cited sufficient to present this new use of the remedy; that of preventing and controlling convulsions, and other motor disturbances. He has seen so little written on the uses of apomorphia and that usually in relation to its action as an emetic, that he concludes that it is not appreciated at its full value by the profession. He has not been able to find any report of the use of apomorphia in motor disturbances for other than the relief to be expected from emptying the stomach, except a case in which a German physician succeeded in cutting short epileptic attacks by the subcutaneous injection of apomorphia during the aura; while Dr. Edward Cockrell, of England, is reported to have successfully treated infantile convulsions by its use. It is not stated whether the convulsions resulted from gastric disturbance or not; but as that is the usual cause of convulsions in children, we may suppose that its emetic action was sought in this case. The remedy has hitherto been used principally for its emetic action, and this was Dr. Horsley's object in using it, until he accidentally found that it controlled the spasms produced by strychnine poisoning. Since that time he has been using apomorphia for all convulsions, and in no case has he yet been disappointed as to the result. He calls attention to the fact that it arrests or prevents spasms and other motor disturbances. From the results obtained from its use in his limited experience, he confidently expects it to control any spasm not caused by lesion of the brain or spinal cord.

It is quite probable that this remedy will be of service in controlling the spasms during an attack of tetanus or rabies. He has had no opportunity of testing its value in either case, but from the analogy existing between these affections and poisoning by strychnine, Dr. Horsley thinks we might reasonably give it a trial in these affections.

Pathological Anatomy and Pathogeny of Ecthyma.

Leloir and Vidal discuss the pathological anatomy and pathogeny of ecthyma at considerable length in the *Gazette Hebdomadaire*, November 15, 1890. They define ecthyma as an auto-inoculable and inoculable disease of the skin, characterized by large, round, globular pustules with a hard base, the pustules being succeeded by brownish crusts which leave on falling off more or less apparent cicatrices. Vidal believes that he has to a great degree contributed towards establishing the fact that ecthyma is a disease by itself, distinct from impetigo and other diseases. It always leaves an indelible trace, a cicatrix more or less depressed and apparent according as the chorion has been more or less injured. Leloir and Vidal have inoculated skin and mucous membranes with the pus from various tissues and inflammations and have invariably failed to produce ecthyma. On the other hand, the pus from true ecthyma, when inoculated or auto-inoculated, reproduces a characteristic ecthymatous pustule, which reaches its height on the fourth day; and, from this one, another series of pustules can be obtained, up to five successive generations. Exceptionally a sixth generation can be obtained, but usually the reproductive power lessens with each successive crop.

Simple ecthyma usually runs an acute course. Its duration, which is ordinarily a few weeks, can be abridged by treatment to a few days. If uncared for, and in debilitated persons or such as are addicted to alcohol, it may pass to a chronic state, either by successive auto-inoculations which perpetuate the duration, or by giving place to chronic ulcers.

If it appears probable that in a certain number of cases at least ecthyma is caused by the entrance of micro-organisms into the epidermis, this has not yet been demonstrated absolutely. Up to the present time no one, as far as Leloir and Vidal know, has succeeded in producing ecthyma by inoculating cultures more or less pure of its micro-organisms. Possibly the alkaloids produced by the organisms are also necessary. But the question of causation is more complex than it seems at first sight, for lesions having all the characteristics of ecthyma have been seen to follow affections of the nervous system. It is also certain that in a number of cases ecthyma is produced by toxic chemical agents coming from without, and, in certain cases, perhaps, secreted by the organism and eliminated by the skin; but Leloir and Vidal do not say whether or not they consider these agents sufficient to provoke suppuration in the absence of micro-organisms.

Influence of Tobacco-Smoking on the Stomach.

In the *Vratch*, No. 48, 1890, p. 1091, Dr. N. I. Jdan-Püshkin, of St. Petersburg, writes that in order to study the action of tobacco-smoking on the gastric functions, he has undertaken a course of experiments on seven healthy young men, aged from 17 to 27, all of them being habitually non-smokers. In each instance, the experiment lasted nine days, being divided into three equally long periods, during the second of which the subject was smoking 25 cigarettes a day. Briefly told, the following conclusions were reached by the author. 1. Tobacco-smoking increases the secretion of the gastric juices, but at the same time lowers its general acidity. 2. It also decreases the proportion of free hydrochloric acid in the juice, and that in a direct ratio to the fall of the general acidity. 3. The diminution of the proportion of free hydrochloric acid, as can be expected, leads to weakening of the digestive powers of the juice. 4. Tobacco-smoking retards the secretion of the rennet-ferment (Hammarsten's *Lab-ferment*), as shown by a marked retardation of curdling of milk after the addition of the juice. 5. All the changes prove to persist for a couple of days after discontinuing smoking. 6. The motor and absorptive powers of the stomach, however, are somewhat increased by the use of tobacco [meanwhile Drs. Teïdnovsky, Grammatchikoff, and Ossendowski have found that smoking retards the passage of food from the stomach into the duodenum.—REPORTER]. 7. Smoking does not manifest any influence on the acidity of the urine. On the whole, the author seems to entertain rather unfavorable views in regard to tobacco-smoking. Amongst other things, he points out that the weed depresses the assimilation of proteids (as Grammatchikoff's and Ossendowski's experiments have shown), raises the bodily temperature and accelerates the pulse (Prof. I. V. Troitzky), causes sometimes dyspepsia, constipation, meteorism and other gastro-intes-

tinal disturbances (Treumann, Dubois), produces cardiac neuroses, failure of vision, etc., etc.

Micro-Organisms in Cities.

Professor Tarnier in his course of lectures on obstetrics, in 1890, referred to M. Miquel's researches on the relative abundance of micro-organisms in different places. One to the cubic meter of air is the proportion at the top of a high mountain. In the Parc de Montsouris in the south of Paris, M. Miquel found 480 micro-organisms to the cubic meter of air, whilst in the Rue de Rivoli the proportion was 3,480. In a new room in the Rue Censier he found 4,500 to the cubic meter; more, that is to say, than in the centre of Paris in the open air. In a room in the Rue Monge, he counted 36,000, in the Hotel Dieu 40,000, and in the Pitié, an older hospital, 319,000 micro-organisms to the cubic meter. At the Observatory Montsouris, 650,000 microbes were found in a gram (15 grains) of dust; in the room in the Rue Monge the amount was 2,100,000. In the hospitals the proportion was so high that counting the number of microbes in a whole gram of dust was found to be impossible. The dust is the great conveyor of micro-organisms. At 2 A. M., when a city is most quiet, the fewest germs are to be found in the air; at 8 A. M. the industry of domestic servants and dustmen has already made the air to teem with germs. At 2 P. M. the proportion has again greatly fallen; at 7 P. M. it is once more high, for many houses are being "tidied up"; besides sundry kitchen-operations are unhygienic. Thus the "small hours" unfavorable in many respects to patients hovering between life and death, are the least septic of the twenty-four. The day proportions indicate that household duties cause more septic diffusion than is excited by traffic and industry.—*British Medical Journal*, November 15, 1890.

"Antifebrinization" in Typhoid Fever and Consumption.

According to the *Wiener med. Presse*, October 19, 1890, Dr. Favrat has made numerous trials in the clinic of Prof. Sahli, of Berne, of "antifebrinization" with minute doses of antifebrin. He communicates a paper on the subject to the *Archiv für klin. Medicin*, Bd. 46, and recommends the practice in typhoid fever and consumption. He says that antifebrin in doses of from five to ten centigrammes (¾ of a grain to one and one-half grains), is well borne by patients with typhoid fever and phthisis. It produces a gentle antipyresis which is grateful to the patient, and, administered in the way just mentioned, to a great degree the evils of large doses are avoided. In children it is proper to begin in all cases with doses of one-sixth or one-third of a grain. In typhoid fever the administration of the minute doses in the way described causes a lowering of the fever and an improvement in the subjective sensations of the patient. The hectic fever of phthisical patients is also overcome and the patient made more comfortable. The remedy acts better the higher the fever. In phthisical patients a dose of from five-sixths of a grain to one and one-half grains sometimes suffices to depress the temperature more than three and three-fifths degrees Fahr. In cases in which antipyresis is long continued the patient becomes gradually accustomed to doses that were at first effective. It is then best not to increase the dose but to stop the remedy for a time or to substitute another for it. Later on the doses used at first will again be found effective.

Abortion for Vomiting of Pregnancy.

Dr. Henry Fruitnight, of New York, in the *American Journal of Obstetrics*, December, 1890, gives a review of the subject of inducing abortion for the vomiting of pregnancy, with description of cases, and says:

"From these histories the following deductions can be drawn: First, that when nature spontaneously interrupts the course of pregnancy by the occurrence of premature delivery, the patient recovers. Secondly, that when pregnancy is allowed to proceed uninterruptedly to its natural termination, an almost certain fatal result will befall both mother and child. Thirdly, that when the patient, the victim of grave vomiting, is permitted to advance too far in the course of pregnancy before the operation of induction of premature labor is done, the probability is that she will not be able to resist the added shock of the operation in her already debilitated condition, but will succumb. Fourthly, that when the operation is done *secundum artem*, at the properly elected period of time, the probability is that we will save the life of the mother in

any event, and in many instances, in proper cases, the lives of both mother and child. And upon these deductions the following conclusion is based: When hyperemesis seriously and dangerously affects the health of the woman, and does not respond to a judicious and systematic course of treatment with all known and approved remedies, then the operation of the induction of premature labor in such cases is at once justifiable and the only thing left for us to do."

Women and Women Physicians in India.

The *Indian Medical Gazette*, November, 1890, says that the native women frequenting the Balrampur Hospital, Lucknow, are so much behind the age that they elect the services of male in preference to female doctors. This is what Dr. Rice, the Inspector-General of Civil Hospitals, says on the subject:—"With regard to the 934 major surgical operations done in the female hospitals, it is but right that I should state that the large majority of them have been done by the Civil or Assistant Surgeons, and this is right generally. The greater part of them are of a nature unconnected with the sex of the sufferer. I have myself seen women insist that the operations should be done by the male doctor: and not only that, but that they should be done in the male hospital, so as to make sure of his operating. The principle of management is that, as far as we are concerned, every women shall be left a free agent in the selection of the particular division of the hospital in which she shall be treated."

Hydrate of Amyl in Epilepsy.

In a recent number of the *Therapeutische Monatshefte* the experience of the use of this drug in doses of from five to eight grams per day, in the cases of seven epileptics, is related. Two of the patients, previously subject to from nine to eleven attacks per month, remained free from them as long as the drug was taken; in a third improvement seemed to take place at first; in the remaining four no appreciable effect was produced on the number or severity of the fits. In all seven there was produced by the drug a great desire for sleep, and after it was left off the rest was disturbed; and in cases in which previously sleep had been sound and undisturbed, it now became light and broken. In three patients, also, after the medicine was left off, there were for several days series of fits, although those patients previously had not, as a rule, had more than one or two convulsions in the day.

A Laryngological Curiosity.

The *Medical Press*, December 3, 1890, states that at a recent meeting of laryngologists in London, Mr. Lennox Browne described the case of a middle-aged woman who was sent to him from the provinces for the purpose of deciding whether her malady was laryngeal cancer or phthisis. Though a tall, large-boned woman, she only weighed a little over ninety pounds, and was obviously very much emaciated. He peeped down her larynx and to his surprise saw what he recognized to be a plate with artificial teeth firmly impacted in the larynx, where it had been for the last twenty-two months unknown to the patient. She remembered having been awoke in the middle of the night by a violent fit of vomiting, and when the teeth were inquired after it was assumed that they had been thrown away with the dejections. From that day forth, however, she suffered from difficulty in breathing, pain on swallowing, etc., associated with progressive emaciation. With some difficulty the plate was removed and exhibited to the admiring friends, and the patient rapidly recovered health and spirits.

Raori Resin.

The *Druggists' Circular*, December, 1890, says that a report from Noumea, by M. Formet, speaks favorably of the use of Raori resin —otherwise called Sydney gum or Caledonian balsam—as a suitable medium for the external application of antiseptics. It forms a coating over wounded surfaces. In cutaneous affections it is of great service; and also in the treatment of sprains and fractures when the limb must be kept rigid.

Disguise for Cod-Liver Oil.

A mixture of equal parts of cod-liver oil and lime-water is said to be nearly tasteless, but may be made more palatable by the addition of an aromatic syrup.